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BRAINS AND OTHER PARAPHERNALIA OF THE DIGITAL AGE*

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> *Electronic text . . . brings with it . . . profound changes in the arts and letters, and in how we organize them as a social activity through a legal system of intellectual property. Interactive digital fiction invites the reader's collaboration. Digital music of all sorts invokes, with one degree or another of conscious didacticism, the creative interaction of the listener/composer . . . .*
>
> *This volatility metamorphoses scholarly inquiry in the same way. Western poetics and philosophy are transformed, for a start. The Aristotelian categories of beginning, middle, and end, it turns out, are based on fixed texts. Think of all the arguments about coherence and perfection of artistic form that depend on these Aristotelian coordinates. Again, such arguments have been made a general ideal of western expression. All our arguments build toward a conclusion. We find scholarly disputation unthinkable without one — how else are we to separate the true from the false, the good from the bad.*[1]

I. INTRODUCTION

Copyright devotees, along with other information brokers, stand on the cusp of a radically new way to carve up their discipline — in the despatialized realm of the Internet. Is a May/December marriage of fresh new media with crotchety doctrine from the print age[2] doomed to end with nasty recriminations in a bitter divorce? This article examines that brainteaser as it takes an idiosyncratic excursion through the cases and literature, ever conscious of the phenomena by which electronic brains are posing new challenges for biological brains to unravel.

One enters this bramble at double peril. First, as the epigram adumbrates, the absence of a Received Text that characterizes the

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1. RICHARD LANHAM, THE ELECTRONIC WORD: DEMOCRACY, TECHNOLOGY AND THE ARTS 124-25 (1993).

2. Ever since McLuhan, it has become customary to trace the revolution to Gutenberg, half a millennium ago. *See* MARSHALL MCLUHAN, THE GUTENBERG GALAXY: THE MAKING OF TYPOGRAPHIC MAN (1962). *See, e.g.*, Ethan Katsh & Janet Rifkin, *The New Media and a New Model of Conflict Resolution: Copying, Copyright, and Creating*, 6 NOTRE DAME J.L. ETHICS & PUB. POL'Y 49, 53 (1992). *See generally* PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: THE LAW AND LORE OF COPYRIGHT FROM GUTENBERG TO THE CELESTIAL JUKEBOX (1994); 1 & 2 ELIZABETH EISENSTEIN, THE PRINTING PRESS AS AN AGENT OF CHANGE (1979). But one commentator, with a pipeline to Higher Authority, expands the horizon fourfold. *See infra* note 30.

volatile medium of cyberspace means that we are perforce entering a multivalent world. This Article reflects that phenomenon. Readers expecting a unified train of thought leading to a certain destination should stand warned at the outset of their inevitable disappointment. For this writer has not the foggiest notion today of where that destination lies; I can therefore only serve as a modest tour guide of some of the more startling, wonderful, and *outré* aspects of the terrain.

Second, law library shelves already groan under the weight of innumerable papers, bills, proposals, and jeremiads organized around the dangers of the digital age. One therefore need not even go on-line to become intimately familiar with those on-line dangers. For the perils of the Internet find complete ventilation in the low-tech media of print publication,[3] not to mention in the innumerable[4] symposia organized around this theme.[5] With apologies for contributing to that glut, this Article adds modestly to the information overload afflicting our profession.[6]

The irony of those conclaves is that their participants are, almost to a person, richly endowed with telephones, faxes, e-mail, even videoconferencing ability. Yet they gather in meatspace (better, "meet-space") in order to discuss cyberspace.[7] This phenomenon says that we

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3. "The notion of copyright seems faintly absurd. . . ." JAY DAVID BOLTER, WRITING SPACE: THE COMPUTER, HYPERTEXT, AND THE HISTORY OF WRITING 29 (1991). *See generally* Martha Woodmansee, *On the Author Effect: Recovering Collectivity*, 10 CARDOZO ARTS & ENT. L.J. 279 (1992).

4. Regardless of whether the Internet as a viable technology ever reaches full fruition in the future, the present is such that it is more than a full-time job just to attend the burgeoning seminars in this field. *See* Mihaly Ficsor, *Towards a Global Solution: The Digital Agenda of the Berne Protocol and the New Instrument*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 111, 119 (P. Bernt Hugenholtz ed., 1996).

5. "Symposium" comes from the Greek roots for drinking together. But as the wealth of disparate articles cited below attests, the discord in the field has grown too great for even a cask of Armagnac to bridge.

6. *See* David Nimmer, *Glut*, 2 THE MULTIMEDIA LAW REPORTER, May 1996, at 9. *Cf.* Thomas G. Krattenmaker & L. A. Powe, Jr., *Converging First Amendment Principles for Converging Communications Media*, 104 YALE L.J. 1719, 1730 (1995) ("Much of the information on the infobahn will be dreck.").

7. On the eve of publication of this Article, I attended the Diplomatic Conference on Certain Copyright and Neighboring Rights Questions in Geneva. No sooner did the delegates assemble than they engaged in lengthy procedural maneuvering, the first major order of business being the proposal by the United States delegation that the Special Delegation representing the Member States of the European Community not be allowed to cast group votes unless delegates of those Member States were physically present in the conference room at the moment of the vote. *See* WIPO Doc. CRNR/DC/8 (Dec. 3, 1996). The Europeans strenuously objected that they should be allowed to cast votes for all EU states credentialed to the conference. The United States proposal ultimately prevailed. Thus, the first accomplishment of the combined world forces of copyright, convened in Geneva to consider how best to adapt the international regime of copyright to cyberspace,

have only reached the outskirts of ground zero; having not yet arrived, we are still dancing on the edge.

A. Geography, Identity, Scholarly Voice

Some quotes from a wonderful book — the first that a reputable publisher released simultaneously in bound copies and on the Net — set the stage for this inquiry.[8] Its author, the dean of M.I.T.'s School of Architecture and Planning, points out that the Internet is bringing us to convergence across many fields, not simply copyright, not even simply law as a whole. Three areas are illustrative. The first is geography:

> In the standard sort of spatial city, where you are frequently tells who you are. (And who you are will often determine where you are allowed to be.) Geography is destiny; it constructs representations of crisp and often brutal clarity. You may come from the right side of the tracks or the wrong side, from Beverly Hills, or Watts, from Palos Verdes or Compton. (If you are homeless, of course, you are absolutely nobody.) But the Net's despatialization of interaction destroys the geocode's key. There is no such thing as a better address, and you cannot attempt to define yourself by being seen in the right places in the right company.[9]

The second is identity:

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was to rule physical presence within eyeshot of meatspace all-important. Was I the only one in the hall to savor the richness of the irony?

8. WILLIAM J. MITCHELL, CITY OF BITS (1995) <http://www-mitpress.mit.edu/City_of_Bits/>. Citations to page numbers of this work are absent below, as I read the on-line version. Note that a previous article cited this work at a wholly different URL. *See* M. Ethan Katsh, *Rights, Camera, Action: Cyberspatial Settings and the First Amendment*, 104 YALE L.J. 1681, 1686 n.14 (1995). Dean Mitchell himself notes that the volatile nature of cyberspace means that hypertextual links are all destined to crumble, leaving only archeological remains over the course of time. On the other hand, the profusion of Net search engines means that soon, we can dispense with ponderous URLs of the type cited above; the newcomer can simply ask a Lycos, AltaVista, or Magellan to search for "City of Bits by William Mitchell," thus restoring natural language to primacy.

9. *Id.* One quibble with Mitchell is that in ancient times (i.e., until last year) having an e-mail address through CompuServe or America Online branded one as an unsophisticated "newbie." Even today, e-mail addresses outside the United States have appended a country designation, e.g., ".uk" or ".it". By contrast, URLs within the United States bear no such suffix, thus imparting the notion that Americans are truly cyberspatial, whereas "foreigners" are not.

> While I present myself to others on the Net through the aliases and descriptors I choose and the connections these aliases and descriptors establish, I also construct those others and they simultaneously construct me. (Different keystrokes for different folks.) But the process of mutual construction usually gives very little away. Because communication takes place without my bodily presence or the sound of my voice, others who 'know' me quite well may not realize how I look or how I present myself in person, and thus may be unable to make the usual inferences from that. . . . My representation on the Net is not an inevitability of biology, birth, and social circumstance, but a highly manipulable, completely disembodied intellectual fabrication; electronic cross-dressing is an easy and seductive game . . . . There are games of constructing electronic closets, and moments for coming out of them.[10]

My third pet area of convergence deals with scholarly voice. While preparing this piece, I was called upon to review the galleys for an upcoming article to appear in the *Journal of the Copyright Society of the USA*.[11] The irony is that I prepared and submitted that article entirely in electronic format.[12] Yet the editors took it and (*pace* the above reference to "galleys") reduced it to print fixation. They then embarked on the process of shooting ink on (again to quote Dean Mitchell's felicitous phrase) "tree flakes encased in dead cow."[13] For it is that latter format (i.e. letter format) that we have historically viewed as authoritative.

But this notion that something is only "authoritative" once it has been "published" is nothing other than the *ancien régime* of meatspace reasserting itself in the inhospitable domain of cyberspace. Why should authors of today labor as galley slaves like our forebears, who had no choice in the matter? To be honest, I doubt that more than a dozen people in the world are sufficiently interested in my particular ruminations about the termination-of-transfer doctrine to slog through the whole analysis in the *Journal*.[14] Wouldn't it be simpler for me just to maintain

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10. *Id.*

11. It has since appeared. *See* David Nimmer, *Abend's Stepchild*, 43 J. COPR. SOC'Y 139 (1996).

12. *See* Katsh & Rifkin, *supra* note 2, at 56 ("[A]ll words that appear in print today pass through an electronic stage.").

13. MITCHELL, *supra* note 8.

14. Actually, I am probably flattering myself by inflating the estimate — the only human being who has confessed to me that he actually read the article is Peter Jaszi.

an e-mail roster of direct recipients, and send it to their computers instantly?[15] They could have already rebutted my entire argument long before it was destined to appear in hard copy.

In fact, a recent mathematical journal hosted a forum on this subject — one commentator lamented the seemingly inexorable future that those journals are destined to become "roadkill on the information superhighway."[16] Yet a colleague noted that it is not a "tragic loss," but rather "good riddance" that refereed journals are on their way out.[17] Regardless of one's perspective, the change seems difficult to halt in its tracks.

What do geography and identity have in common with the death of peer review in scholarly journals? The thread weaving all of them together is that our previous notions of "authority" have unraveled. The authoritative place is diffuse, the authoritative persona shredded. Neither is the printed word authoritative. That revolution is bound to exert an equal cognitive impact on the cognate of "authority," namely, "author," which brings us into the heart of the field of copyright.[18] In short, copyright scholars are confronting the specter of despatialization.[19]

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15. *See* Ferdinand Melchiar, *Collective Administration of Electronic Rights: A Realistic Option?*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 147 (P. Bernt Hugenholtz ed., 1996).

16. Frank Quinn, *Roadkill on the Information Superhighway: The Threat to the Mathematical Literature*, 42 NOTICES OF THE AMS 53 (1995). *See infra* note 70.

17. Andrew Odlyzko, *Tragic Loss or Good Riddance? The Impending Demise of Traditional Scholarly Journals*, 42 NOTICES OF THE AMS 49, 51 (1995) ("[S]cholarly skywriting and prepublication continuum" refer to process by which "scholars merge their informal communications with formal publications."). This paper is available on-line at <http: //cs.joensuu.fi:8000/tragic_loss_or_good_riddance>.

18. These cognates engage Prof. Lanham in RICHARD LANHAM, THE ELECTRONIC WORD: DEMOCRACY, TECHNOLOGY AND THE ARTS (1993). *See also* Max W. Thomas, *Reading and Writing the Renaissance Commonplace Book: A Question of Authorship?*, 10 CARDOZO ARTS & ENT. L.J. 665, 676 (1992). *Cf.* Marlon B. Ross, *Authority and Authenticity: Scribbling Authors and the Genius of Print in Eighteenth-Century England*, 10 CARDOZO ARTS & ENT. L.J. 495 (1992) ("author" is "authentic").

19. Given that this topic cuts as deeply as the Grand Canyon, a word is in order about important topics that this Article does *not* treat. First, the Internet has no respect for national borders; therefore, the law of every jurisdiction is potentially implicated. *See* Paul Edward Geller, *Conflicts of Law in Cyberspace: Rethinking International Copyright in a Digitally Networked World*, 20 COLUM.-VLA J.L. & ARTS 571 (1996); I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace"*, 55 U. PITT. L. REV. 993, 1051-53 (1994). Second, interactive media open up new vistas for authorship itself, facilitating creations that could not exist prior to their advent. *See* Pamela Samuelson, *Some New Kinds of Authorship Made Possible by Computers and Some Intellectual Property Questions They Raise*, 53 U. PITT. L. REV. 685 (1992); Katsh, *supra* note 8, at 1689 ("a new kind of book and new ways to write and read"). *But cf.* Jeffrey A. Masten, *Beaumont and/or Fletcher: Collaboration and the Interpretation of Renaissance Drama*, 10 CARDOZO ARTS & ENT. L.J. 625 (1992) (positing collaborative authorship as the norm at the time of Shakespeare). *See generally* Peter Jaszi, *On the Author Effect: Contemporary Copyright and Collective Creativity*, 10 CARDOZO ARTS & ENT. L.J. 293 (1992). Notwithstanding the importance

B. The Transporter Room

Before going any further, the reader's indulgence is begged for an ultracrepidarian homage to the great authority who achieved the ultimate specialization in despatialization: Montgomery Scott of the Starship Enterprise. Consider the complex chore with which Captain Kirk tasked Mr. Scott: To move from Place A to Place B a human brain, the most complex creation in this universe.[20]

Professor Lawrence Krauss, in a recent book on the physics of Star Trek,[21] evaluates what would be required to induce the phase-transition coils on a galaxy-class ship to accomplish that chore. He starts by asking a fundamental question, familiar to anyone who reads the back columns of *Wired* magazine: Atoms or bits?[22]

The question of atoms or bits recurs everywhere today. For example, 78 rpm records of the past, and even audio CDS, are now giving way to something called "digital phonorecord delivery."[23] Congress amended the copyright statute, effective February 1, 1996,[24] to port copyright in sound recordings of musical works from the antediluvian atomic phase to today's fluid instantiation. That recent piece of legislation exemplifies the atom-to-bit transformation.[25]

But truth to tell, copyright practitioners have long confronted the distinction between atoms and bits.[26] Consider the 1976 Copyright Act itself. Whereas previous law had protected various atoms — "books"

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of both of these aspects, this Article limits itself largely to a consideration of U.S. copyright law, as applied primarily to works traditionally subject to copyright protection.

20. *See* GEORGE JOHNSON, FIRE IN THE MIND 25 (1996) (conceding that such a conclusion may be merely a reflection of anthropocentrism).

21. LAWRENCE M. KRAUSS, THE PHYSICS OF STAR TREK (1995). Sadly, I cannot aspire here to as catholic a vision as some who have boldly gone into this space. *See* Rosemary J. Coombe, *Author/izing the Celebrity: Publicity Rights, Postmodern Politics, and Unauthorized Genders*, 10 CARDOZO ARTS & ENT. L.J. 365, 376 (1992) ("gay male camp subculture in the pre-liberation era, lesbian refashionings of pop icons, and, finally, middle class women's engagement in the reading, writing, and circulation of *Star Trek* fanzines").

22. *See generally* NICHOLAS NEGROPONTE, BEING DIGITAL (1995) (expanding *Wired* magazine columns)

23. 17 U.S.C. § 115(d) (1994).

24. Digital Performance in Sound Recordings Act of 1995, Pub. L. No. 104-39, 109 Stat. 336.

25. For a thorough analysis, *see* 2 MELVILLE B. NIMMER AND DAVID NIMMER, NIMMER ON COPYRIGHT §§ 8.21 - 8.23 (1996) [hereinafter NIMMER ON COPYRIGHT]. Note that the amendment itself furthers the process of convergence with which this Article is concerned. *See id.* at § 8.24.

26. The pedigree of the distinction is actually quite ancient. Echoes of it can be found in the commentary of Ibn Ezra (b. 1092) on *Deuteronomy* 17:19. See David Nimmer, *Adams and Bits: Of Jewish Kings and Copyrights* (forthcoming).

being a prime example[27] — the current act grants protection instead to a conglomeration of bits — a "literary work" being the exemplar here.[28] Thus, a "literary work" is protected under current law whether embodied in the form of a book, or alternatively[29] as a CD-ROM, an audiocassette, a film strip, a videotape, even as a papyrus scroll.[30]

Now to move to Professor Krauss's question — atoms or bits? If the chore of moving Lieutenant Uhura from Point A to Point B is a question of atoms, then the physics are straightforward. It is simply a bit tough — or an atom tough. You need to heat up the matter concerned until it disintegrates into quarks and then send it to its pertinent destination. The problem with that approach is that in order to accomplish it, you would need to heat up her body to about 1,000 billion degrees — 100 times the energy of a megaton hydrogen bomb.[31] (One gains greater insight into the reluctance of Reginald Barkley and Dr. Kate Pulaski to enter the transporter room.)

Moving now to the realm of bits, things get even more dicey — Einstein's comments about God's ordering of the universe notwithstanding. In order to engage the transporter, we would need to encode the location of every atom in the human body, then we could destroy the copy here, create a copy there, and *voilà*, the transporter has functioned.

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27. *See* Copyright Act of 1909, Pub. L. No. 60-345 § 5(a), Stat. 1076 (repealed 1976) (extending copyright protection to "[b]ooks, including composite and cyclopedic works, directories, gazetteers, and other compilations").

28. 17 U.S.C. § 102(a)(1) (1994).

29. The legislative history for the 1976 Act invokes the examples of "books, periodicals, computer punch cards, microfilm, tape recordings, and so forth." H.R. REP. NO. 94-1476, at 53 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5666.

30. The transition from papyrus rolled into scrolls to the modern codex book engages one recent commentator:

> The story of how the Hebrew Bible and the Old Testament diverged includes, improbably enough, a chapter from the history of technology. Muslim tradition has called Jews and Christians alike "peoples of the book," honoring the divinely inspired scriptures that preceded God's revelation of the Qur'an to Muhammad. In the modern sense of the word *book*, however, the Jews might be more accurately called the people of the scroll. It is the Christians who are the people of the book as we know it.

JACK MILES, GOD: A BIOGRAPHY 16 (1995). For more on the superiority of the codex book as an economical, compressed storage medium, *see id.* at 415-16. Further ruminations on the presocratic philosophers, the progression of the codex book, and cyberspace may be found in RICHARD LANHAM, THE ELECTRONIC WORD: DEMOCRACY, TECHNOLOGY AND THE ARTS (1993).

31. *See* KRAUSS, *supra* note 21, at 73.

This operation is somewhat akin to an ersatz "digital first sale defense," about which more later.[32]

The challenge in the bit approach to the transporter room is that a human body contains 10^{28} atoms.[33] Simply to record the location of each atom in three-dimensional space requires an x, y, and z coordinate. With that many atoms, even if those coordinates were stored in thin 10-gigabyte drives, stacked one upon another, the number of drives would reach one-third of the way to the center of the galaxy; it would take the Starship Enterprise five years, even traveling at Warp 9, to traverse the distance across which the information is stored — simply for one person![34] The inconceivable vastness of that expanse causes one to accede readily to Krauss's conclusion: "If this is the information superhighway, we'd better get in the fast lane."[35]

C. The White Paper

It is not simply the subculture of trekkers who worry about the atom/bit distinction. The Clinton Administration is also deep into the issue.[36] Its recent White Paper about copyright and the implications of the new technologies bites off a goodly number of questions arising in this field.[37]

Some claim that the White Paper is attempting to foist a monstrosity upon us. Professor Jessica Litman claims that the White Paper clothes copyright proprietors with an unprecedented right to control who reads their works.[38] Under that vision, the cherished activity of browsing at a

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32. In other words, people sometimes want to take a hard copy that they have lawfully acquired, scan it, make the scanned copy available over the network, and then destroy the original, claiming all the while that multiple accesses to that document by various users simply constitute an application of the first sale defense. *See infra* text accompanying note 140.

33. *See* KRAUSS, *supra* note 21, at 66 (1995).

34. *See id.* at 77.

35. *Id.* at 74.

36. "One real accomplishment of the Clinton presidency has been to focus attention on the information infrastructure of the economy." JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY 135 (1996).

37. *See* INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995).

38. *See* Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENT. L.J. 29 (1994). *See also* Niva Elkin-Koren, *Copyright Law and Social Dialogue on the Information Superhighway: The Case Against Copyright Liability of Bulletin Board Operators*, 13 CARDOZO ARTS & ENT. L.J. 345, 385 (1995). I am indebted to Prof. Litman for taking the time to respond with precision to an earlier draft of this work; obviously, however, these remarks should not be misconstrued as connoting her agreement with any of my conclusions.

musty, old book shop,[39] updated to reflect current technology, would become a crime.[40] I am reminded of the bumper sticker that my father's car sported: "Use a Betamax, go to prison."

This specter arises because of some recent cases exemplified by the Ninth Circuit's ruling in *MAI Systems Corp. v. Peak Computer, Inc.*[41] that copying software in a computer's random access memory implicates the copyright owner's reproduction right. Unlike Prof. Litman,[42] I find

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39. "To read a copyright text is no violation, only to copy it in writing." ITHIEL DE SOLA POOL, TECHNOLOGIES OF FREEDOM 214 (1983). *See* Samuelson, *supra* note 19, at 703 (remarking on the issue posed by modern literary theory of whether the act of reading may itself be an act of authorship); Max W. Thomas, *Reading and Writing the Renaissance Commonplace Book: A Question of Authorship?*, 10 CARDOZO ARTS & ENT. L.J. 665, 673-76 (1992) ("conflation of reading and writing" in Renaissance productions).

40. Actually, criminal copyright infringement arises only for activity undertaken both (1) willfully and (2) for private financial gain, if not outright commercial advantage. 17 U.S.C. § 506(a) (1994). *See* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 15.01. Although both prongs may conceivably attend Netsurfing, I can state, as a former Assistant United States Attorney in charge of handling copyright and trademark prosecutions, that this type of activity would not even rise onto the radar screen of targetable offenses. But when personal browsing crosses over the line to facilitation of others' infringement, the dynamic alters. *See, e.g.*, United States v. LaMacchia, 871 F. Supp. 535 (D. Mass. 1994). *See generally* 3 NIMMER ON COPYRIGHT, *supra* note 25, chap. 15; Robert L. Dunne, *Deterring Unauthorized Access to Computers: Controlling Behavior in Cyberspace Through a Contract Law Paradigm*, 35 JURIMETRICS J. 1, 7 (1994).

41. 991 F.2d 511 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994).

42. Prof. Litman concedes that "three recent cases [and] a stray reference in the CONTU report" support the conclusion that RAMs reproduce. *See* Litman, *supra* note 38, at 41. Against those, she arrays the statutory language and House Report. *Id.* at 42. Both those sources advert to the transitoriness of the subject fixation. Thus, the legislative history of the 1976 Act discounts as "fixed" works "purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the 'memory' of a computer." H.R. REP. NO. 94-1476, at 53 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5666. From those sources, Prof. Litman maintains that the White Paper's conclusion on this score is an irresponsible distortion. *See* Jessica Litman, *Revising Copyright Law for the Information Age*, 75 OR. L. REV. 19, 21 n.8, 37 n.75 (1996). Nonetheless, the contrary cases did not ignore the statutory language; they concluded instead that those words did not govern the instant situation, inasmuch as fixation in RAM can last much longer than a work that is "captured momentarily." H.R. REP. NO. 94-1476, at 53 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5666. *See infra* note 47. Query whether Congress envisioned that particular phenomenon when the quoted legislative history was drafted, in an era more conversant with batch-processing than with PCs. *See supra* note 29.

the policy[43] underlying that basic proposition eminently defensible:[44] If my computer makes a copy of a copyrighted short story[45] for your computer, which in turn makes a copy for someone else's computer, until at the end of the day 100 separate users possess and review[46] the text[47] that was initially confined to my work-space, then it seems only sensible to deem implicated the copyright owner's reproduction right.[48] So far so good for *MAI v. Peak* and the White Paper.[49] (Nonetheless, that

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43. "Of course, at bottom of what disturbs the critics about calling on-screen displays 'copies' are the ultimate ramifications for life on the Internet, rather than the correctness of the technical legal reasoning about the stability of RAM." Ira L. Brandriss, *Writing in Frost on a Window Pane: E-Mail and Chatting on RAM and Copyright Fixation*, 43 J. COPR. SOC'Y 237, 259 (1996).

44. In this regard, I agree with the testimony of Mihaly Ficsor of the World Intellectual Property Association to a joint hearing of the U.S. Congress: "It would be in conflict with the Berne Convention to deny the application of the right of reproduction just because a reproduction is not in tangible form, or because it is only temporary . . . any fixation of the work in a computer memory, even for a very short time" satisfies Convention standards. *Testimony on the N.I.I. Bills on H.R. 2441 and S. 1284 before Joint Subcommittee on Courts and Intellectual Property*, 104th Cong. 57 (1995).

45. The point could also be made about computer software, which was the copyrightable work at issue in *MAI v. Peak*. However, as noted above, I am attempting to treat traditional categories of copyright ownership. *See supra* note 19. For that reason, a sharper focus emerges if we concentrate on a copyrightable short story — or clip of a motion picture or segment of a song — rather than on a "new" work of authorship such as computer software, which engenders its own conceptual confusion. *See generally* Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994).

46. As will be set forth more fully below, if we could only see the future, we could more efficiently adopt legal rules for the present. *See infra* text accompanying note 159. Will the market for short story anthologies at book stores evaporate as people read them on-line? Or will people simply engage in word searches on-line, that will lead them to buy more hardbound anthologies?

47. Those 100 copies each exist only so long as the power source is maintained to each of the computers in which they are resident. But that period may last hours or days, and hence is longer than a period of transitory duration. *See* Services of Michigan, Inc. v. MAI Systems Corp., 845 F. Supp. 356, 363, 364 n.9 (E.D. Va. 1994) (storage in RAM capable of being "left on for extended periods of time, say months or years"). As to what happens when the juice is cut off, *see infra* text accompanying notes 201-203.

48. But what did Congress intend? The familiar specter of technology leapfrogging legislative intent should leave few surprised if Congress, enacting in 1976 a bill drafted years or decades earlier, and then amending it to adopt CONTU's recommendations in 1980, did not hold a precise intent about RAMs, cyberspace, or the Internet. *See* National Broadcasting Co. v. Sonneborn, 630 F. Supp. 524, 528 (D. Conn. 1985) (case involving copyright of *Peter Pan* "demonstrates how technology has made some traditional categories of copyright law anachronistic.").

49. Assent to some of the White Paper's analysis does not equate to endorsement of its legislative proposal. The Internet as a whole has not yet reached Release 1.0, and the "data points" regulating conduct in cyberspace (i.e., reported copyright decisions) still number only a handful. *See* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 12.04[A][3][e] (canvassing cases). For that reason, biding our time may be the most prudent course at

unobjectionable proposition, it is argued below, was triply unnecessary under the facts that *MAI v. Peak* actually presented to the court.)[50]

More to the point, what does all this have to do with the right to read? From the computer's standpoint, display of anything on the user's screen is dependent upon reproduction of the subject work in volatile memory. Thus, it is absolutely correct to maintain that the only way to read something from a diskette is to reproduce it, in effect, and then to display it in readable form (whether on-screen or off-line). From that standpoint, there is more than a bit of truth to the notion that a copyright owner, under the scheme envisioned by the White Paper adopting the holding of *MAI v. Peak*, can actually control the right to read.

II. FOUR QUESTIONS

Nonetheless, without discounting the valid points raised by the right-to-read camp, I come at the issue from the opposite perspective.[51] In attempting to de-demonize the right to read, I have composed a quadruple inquiry. With the reader's kind permission, I now recite the four questions:

- Is it revolutionary?
- Is it universal?
- Is it ineluctable?
- Is it unprecedented?

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present; the alternative may be tantamount to mandating that every classroom across the country be outfitted with a Betamax. *See* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984) (Supreme Court validating technology that soon thereafter fails in the marketplace).

Based on the above perspective, I have urged restraint in several speeches on the subject, some of which appear on the Internet. *See* David Nimmer, Internet.l@w.europe.96, Amsterdam (Feb. 13, 1996); Harvard Conference on the Internet and Society, Cambridge, Mass. (May 28, 1996) <http://www.harvnet.harvard.edu/HyperNews/get/discussion/ip_online2.html>; Copyright Issues in Cyberspace, New York City, New York (June 6, 1996) <http: //www.bender.com/nimmer.htm> (panel discussion together with Register of Copyrights and Assistant General Counsel of AOL); Intellectual Property Conference of the Americas, Santa Monica, Calif. (July 16, 1996). Along with Prof. Lessig, I would like "to let these questions simmer for a while . . . ." Lawrence Lessig, *The Path of Cyberlaw*, 104 YALE L.J. 1743, 1752 (1995). *See also* Owen Fiss, *In Search of a New Paradigm*, 104 YALE L.J. 1613, 1617 (1995) ("To move too quickly might well be to constrict the as-yet unrealized expressive and associational potential of cyberspace.").

50. *See infra* text accompanying note 84.

51. As will become apparent at various points below, I nonetheless share the concerns of the right-to-read faction sufficiently to urge various exceptions to the copyright owner's rights.

A. Is It Revolutionary?

Turning to the first question, is the right to control reading revolutionary? Or, to leaven up the matter a bit, what makes this right different from all other rights?

There are revolutions and then there are revolutions. The Russian was unlike the French, and perhaps even more distinct from the American. Likewise, three different perspectives are usefully brought to bear on the information revolution.[52]

1. Browsing In General

If conceptualized as wholly revolutionary, the "right to read" collapses along the lines of a Potemkin village. To appreciate this perspective, we first must broaden the reference to "read" to encompass more properly "experience." After all, we do not *read* movies, we *see* movies; by the same token, we *hear* sound recordings.[53]

The public has no "right to see" movies under present law. It is true that copyright owners routinely make snippets available in trailers to whet the public's appetite. By the same token, record companies[54] encourage air time for songs, notwithstanding that they derive no payment from that type of performance;[55] rather, the record companies

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52. Some apparently sober observers credit information as the substratum of reality, more basic even than the bosons and leptons of quantum physics. *See generally* JOHNSON, *supra* note 20. One need not go as far as those who maintain that information is a life form that wants to be free to acknowledge that some profound movement is occurring here. *See* John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age (Everything You Know About Intellectual Property is Wrong)*, WIRED, Mar. 1994, at 84. Consider that the Chairman of United Parcel Service (a much less longhaired voice than *id.*) proclaims that "we've learned that information about a package is often as important as the package itself." Ethan Katsh, *Digital Lawyers: Orienting the Legal Profession to Cyberspace*, 55 U. PITT. L. REV. 1141, 1173 (1994). *See* Katsh, *supra* note 8, at 1696-97 (1995).

53. The inquiry here is into "the exclusive right to control reading, viewing or listening to any work in digitized form." Litman, *supra* note 38, at 31-32.

54. As opposed to record companies, which typically hold the copyright to sound recordings, music publishers, which typically hold the copyright to the musical work rendered on the sound recording, do enjoy a right to royalties from radio air play, which they handle through the instrumentality of performing rights societies. *See* Robert D. Sprague, *Multimedia: The Convergence of New Technologies and Traditional Copyright Issues*, 71 DENV. U. L. REV. 635, 641 (1994) (placing this means of collecting royalties in context with other multimedia exploitations). *See generally* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.19.

55. *See* 17 U.S.C. § 114(a) (1994). Even though the Digital Performance Right in Sound Recordings Act of 1995 augmented the performance right in sound recordings, it explicitly continued the exemption for over-the-air broadcasts. 17 U.S.C. § 114(d)(1)(A)(iii) (1994). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.22[B][1][a].

think that air time will redound to their benefit through contributing to public familiarity, and hence sales.

It is equally true that publishers like readers to browse around at book stores, and largely for the same reason. But if shrink-wrapping were to help a particular title, then the publisher would shrink-wrap it and hence prevent browsing. Indeed, when Madonna's *Sex* book was made available several years ago, one book store charged customers a dollar a peep.[56] So much for a "right" to browse under current law.

A copyright owner who denies all browsing rights, in short, is not abusing her monopoly under current law.[57] As a practical matter, therefore, even if the Internet explosion gives owners the right to control the public's experiencing of copyrighted works, that by itself is not revolutionary.[58]

2. Snow White and Peter Pan

Taking the matter one step beyond browsing rights, the technical question arises: Under current law, can the copyright owner exercise exclusive rights over the public's ability to experience the copyrighted work? At times, the answer is affirmative, guillotining the notion that it is a full-blown revolution that cyberspace poses.

Consider your standard-issue motion picture in the period of the 1930s through the 1970s. During this half-century in which motion pictures were accorded protection under U.S. copyright law,[59] the motion picture studios typically engaged in a controlled theatrical release of the motion picture, in later decades augmented by subsequent windows for television broadcast.[60] In no case were commercial-quality prints of the

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56. *See* Maureen O'Brien, *Madonna's Controversial "Sex" Due in Bookstores Next Week*, PUBLISHER'S WEEKLY, Oct. 12, 1992, at 9 ("$1 per minute for the chance to leaf through it"). Though this citation was too good to pass up, it does forfeit for me the crown that one commentator rightly establishes. *See* BOYLE, *supra* note 36, at xvi ("I would also add in my own defense that the following pages are entirely free from references to Madonna. Surely this ought to be worth something.").

57. For more on the misuse defense, *see infra* text accompanying note 99.

58. A thoughtful essay points out the qualitatively different experience of browsing a dog-eared volume and the same literary work through the porthole of a computer's user interface. *See* Pamela Samuelson, *Digital Media and the Changing Face of Intellectual Property Law*, 16 RUTGERS COMPUTER & TECH. L.J. 323, 336-38 (1990).

59. Copyright Act of 1909, Pub. L. No. 60-345 § 5(l), 35 Stat. 1076 (repealed 1976).

60. *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[B][1].

movie made available to the public at large.[61] The Copyright Act for that reason considered those films to be "unpublished."

"Publication" is a copyright term of art meaning that the public has been afforded an opportunity to obtain physical ownership of tangible embodiments of the work.[62] In the perverse fashion that copyright law has often progressed,[63] millions of viewers coast-to-coast may have seen Mary Martin flying across their television screens in the role of Peter Pan; yet the fact that no viewer retained a tangible embodiment of the performance means that it remained unpublished.[64] By contrast, to the extent that I were to set up a sidewalk booth with two copies of my poetry akanthology available for sale to any paying customer, then my poems have been published, even if (disproving P.T. Barnum in this instance) not a single copy were actually purchased.

Thus, to cite an example, Disney released *Snow White and the Seven Dwarfs* in 1937, and periodically thereafter in theatrical re-release. Even when the medium of videotapes (and later laser discs) gained popularity, Disney adopted a conscious stratagem of withholding those eight

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61. This decision was highly deliberate, rather than being a necessary concomitant of technology. The Hollywood studios engaged in a longstanding battle first to crush the VCR at its birth, and later to amend the first sale doctrine to forbid rental of videocassettes. *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8B.01[B] *in fine*. Nonetheless, for the better part of a century, the studios could foresee the eventual day when movies would become household items. *See* Bourne v. Walt Disney Co., 68 F.3d 621, 630 (2d Cir. 1995), *cert. denied*, 116 S. Ct. 1890 (1996) ("[H]ome viewing of motion pictures was within the contemplation of persons in the motion picture industry during the 1930s.").

62. 17 U.S.C. § 101 (1994) ("distribution of copies or phonorecords of a work to the public by sale or other transfer of ownership, or by rental, lease, or lending"). *See* 1 NIMMER ON COPYRIGHT, *supra* note 25, § 4.04.

63. *See infra* note 83.

64. National Broadcasting Co. v. Sonneborn, 630 F. Supp. 524 (D. Conn. 1985). An earlier court held that hundreds of stagings of the play *Peter Pan* over the course of decades, both in England and in the United States, did not start the time limit of statutory copyright ticking; instead, it was the act of "publication" in 1928 that started the term. *See* Hospital For Sick Children v. Melody Fare Dinner Theatre, 516 F. Supp. 67, 70 & n.3 (E.D. Va. 1980). In its home country, a royalty right for *Peter Pan* has been made perpetual. *See* SKONE JAMES ET. AL, COPINGER AND SKONE JAMES ON COPYRIGHT ¶ 1-2 at 2 (1991) ("[T]he 1988 Act has created a new perpetual non-copyright right . . . to receive royalties in respect of certain acts of exploitation of the play *Peter Pan* by Sir James Matthew Barrie, notwithstanding that the copyright in such work expired on December 31, 1987."). For all these reasons, *Peter Pan* exemplifies The Copyright Who Would Not Grow Up.

characters from public distribution. As late as 1990,[65] therefore, she and her cohorts remained unpublished.[66]

The upshot is that, applying traditional principles of U.S. copyright law as of 1990, Disney could control completely the public's right to see Ms. White *et al.* No matter how many times you had taken your kids to the theater — even if you were on a first-name basis with Dopey — Disney could charge whatever freight it desired to admit your offspring back to the theater for the next screening. In this instance, the right to control reading (seeing, here) is not a revolutionary addition to the copyright owner's exclusive rights.[67]

3. Publish or Perish

But in fairness to those who raise a hue and cry over the right to read, there is another aspect to this inquiry that does rise to near-revolutionary import. Disney had the right to control every separate act of seeing *Snow White* only because it maintained the film in an unpublished status. Publishers of books, by contrast, have never developed an analogous means of inviting their lectors to libraries and charging separately for each admission.[68] Instead, the book trade engages in

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65. In 1990, I went to Italy on behalf of the Walt Disney Co., in an anti-piracy effort against unauthorized videotapes of *Bianca Neve ed i Sette Nani*. Prominent in the proof we made to the Italian court is that Disney, even as of that late date, had *never* sold to the public videotapes or any other copies of *Snow White* (whether the English or Italian version). After a long battle, Disney ultimately prevailed in the case. The Walt Disney Company c. Cinepatrizia (Tribunale di Roma, Feb. 17, 1995), *reported in I personaggi di Walt Disney sono immortali*, IL DIRITTO INDUSTRIALE 1058 (Nov. 1995). Showing restraint in the prolonged battle, we refrained from analogizing unauthorized copying of *Bianca Neve* videocassettes to thermonuclear war. *Cf. Intellectual Property Rights Protection Under Special 301: Hearings Before the Subcommittee on Finance, United States Senate*, 102d Cong., 2nd Sess. 19 (1992) (statement of Jack Valenti, President and CEO, Motion Picture Association of America) *noted in* BOYLE, *supra* note 36, at 252 n.9 (1996).

66. Actually, the situation is somewhat more complicated — for reasons that are obscured in the mists of history, Disney actually registered the motion picture in 1937 as a published work. Regardless of whether that decision reflected conscious analysis or a haphazard ticking off of boxes on a form, the point remains valid that in the eyes of the Copyright Act, theatrical performance *simpliciter* does not constitute a performance. *See* 1 NIMMER ON COPYRIGHT, *supra* note 25, § 4.11[A].

67. Likewise, every author of a copyrighted work has the privilege of maintaining it unpublished, and thus securing control over who can read it. *See* Harper & Row, Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 555 (1985). In this respect, U.S. law recognizes a "right of first publication." *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8D.05[A] (analogous to the French *droit de divulgation*). For more on moral rights, *see infra* note 122.

68. Brother Jorge tried a more extreme variant on that approach, with catastrophic consequences, in UMBERTO ECO, THE NAME OF THE ROSE (1983).

publication of copyrighted works — tangible copies are offered to the public.[69] It is here that we can cue the fife and drum.[70]

Once tangible copies enter the stream of commerce, a new dynamic arises. By virtue of the statutory provision colloquially[71] called the "first sale doctrine," the owner of the copy may, without permission from the copyright proprietor, read it, give it to a friend, rent it as part of a library, sell it to a second-hand store, rip it in half, or demolish it.[72]

Leora owns a copy of the book, *Just Grandma and Me*. After her parents have read it to her in excess of 15,000 times, they can give the book to Yonah's folks, who can then engage in their own reading marathon with no additional royalties accruing to the author or publisher. The reason for this lenity is copyright's first sale defense. Once an authorized copy (be it paperback, hardback, recorded on audiocassette, etc.) is sold, the author and publisher have reaped their reward, and can only hope that sufficient porridge stains and tooth marks will induce Leora's parents to buy a new copy.[73]

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69. The same considerations govern release of movies on videotape, as opposed to theatrical exploitation of "unpublished works." As to both physical literary works (books) and tangible audiovisual works (videocassettes), the owner has no right to control the experiencing of the copyrighted work. *See infra* note 75.

70. Reverting to the opening theme of scholarly voice, the same mathematician we've already encountered who decries the end of scholarly journals maintains that the bright line of publication ensures quality, and that a continuum of various levels of publication will degrade quality. "Unfortunately this strong published/unpublished distinction is an artifact of paper publication, and will disappear in the transition to electronic media unless it is deliberately maintained." Quinn, *supra* note 16, at 55. Prof. Quinn views as a defect of cyberspace the phenomenon by which correction of errors becomes virtually undetectable, because it excuses lack of rigor. *See also* Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L.J. 1805, 1837-38 (1995). Yet such invisible error-correction has other facets that can be seen in a favorable light. *See* Samuelson, *supra* note 58, at 329-30.

71. The colloquial usage is imprecise. *See infra* note 132.

72. 17 U.S.C. § 109 (1994). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12. Because the first sale doctrine has evolved over time, a bit more background is required here. When implemented as part of the 1976 Act, it had two provisions. The first consisted of an exception to the copyright owner's exclusive distribution right — once a copyright owner had consented to authorized copies entering the stream of commerce, the copyright owner could no longer control the distribution of those precise copies to remote recipients. Copyright Act of 1976, 17 U.S.C. § 109(a) (1994). The second consisted of an exception to the copyright owner's exclusive public display right — once a copyright owner had consented to authorized copies entering the stream of commerce, the copyright owner could no longer control public display at the work's *situs*, although remote display (over a television network, for example) could be actionable. Copyright Act of 1976, 17 U.S.C. § 109(b) (1994). See 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.20[B].

73. It is no accident that the first sale defense, as of its 1976 enactment, furnished an exception solely to the distribution right (and partially to the public display right, *see supra* note 72) and to none of the copyright owner's other three (and one-half) rights as set forth in 17 U.S.C. § 106. The reason for the distinction is that the other three (and one-half) rights — reproduction, adaptation, public performance (plus public display beyond the *situs*

The same dynamic applies not only to books that are read but to every other type of copyrightable composition. Jacob has purchased a book chronicling the history of his favorite rock group, their most recent CD, a video of their nationwide tour, and a large poster featuring their image — the first sale doctrine allows him to pass each on to a friend.[74] And the internal structure of pre-cyberspace copyright law allows him personally to experience each of those items, no permission needed from the copyright owner.[75] The first sale doctrine can thus be conceptualized as a bar on the author's right to control reading of particular tangible copies of the work after those copies have been sent into the stream of commerce with the author's permission.[76]

But what if Leora had acquired access to *Grandma* not from a book store, but because her parents had downloaded the text off the Internet?[77]

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of the tangible item) — all involve some measure of copying in a broad sense; distribution and public display of an article where the tangible copy is itself located (the other half of the display right) differ qualitatively in that these rights do not involve such "copying," loosely defined. *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[A].

74. As previously noted, the first sale doctrine has evolved over time. The Record Rental Amendment of 1984 amended the doctrine by barring rental, lease, or lending of phonorecords. 17 U.S.C. § 109(b)(1) (1994). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[B][7]. Thus, whereas a vinyl LP legitimately purchased could be rented (or sold, destroyed, lent, etc.) under the first sale doctrine as enacted in 1976, as of the later 1984 amendment its rental and lending was barred (although it still could be sold or destroyed without the copyright holder's permission). But because this 1984 amendment applies only when such conduct is undertaken "for the purposes of direct or indirect commercial advantage," Jacob may lend even the CD to his friend, as long as friendship remains his only motivation. *See* 17 U.S.C. § 109(b)(1) (1994).

75. As to the book, Jacob may read it inasmuch as copyright law embodies no right to read, as we have seen repeatedly. As to the poster, Jacob may look at it inasmuch as the copyright owner can control only *public* display. 17 U.S.C. § 106(5) (1994). As to the CD, to hear it requires that it be played; the video to be seen likewise requires electronic intermediation. In that respect, the CD and the video both bear some resemblance to the diskette-encoded book, which must be sent through a computer to be experienced, thereby launching this inquiry into the right to read. The reason that Jacob's listening to the CD and watching the video, notwithstanding that a performance necessarily emanates from the electronic components to afford him that experience, do not even colorably implicate the copyright owner's rights is that the statute limits the performance right to *public* performances. 17 U.S.C. § 106(4) (1994). In the privacy of his room, or even gathered with family and friends, Jacob is not engaging in any such actionable public performance. *See* 17 U.S.C. § 101 (1994) ("at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered"); Elkin-Koren, *supra* note 38, at 392.

76. The novelist who authorizes copies of her book to be sold cannot control second-hand (as well as third-, fourth-, or fifth-hand) reading of her words as the book is passed from friend to friend. Likewise, the recording artist who consents to release of her albums, the studio that sells videotapes of its films, the music publisher that sells sheet music — all sacrifice the right to control reading (viewing, hearing) of their works by remote recipients of an authorized copy.

77. *See* Volokh, *supra* note 70, at 1839-40 (terming such product a "cbook").

The heightened capabilities of that interactive version could have enticed her folks to pay more in cybercash than a book store would have charged.[78] But in this case, the first sale doctrine — keyed to a distribution of a tangible embodiment of the work — does not facially come into play. Under these circumstances, Leora's parents can no longer transfer a copy of the file to Yonah's, secure in a statutory exemption from liability. For by avoiding publication, the cyberian[79] publisher has leveraged itself into an advantageous position over its hidebound (cardboard-bound too) predecessor.

But things are even worse than that for the public's right to read. Imagine that Leora's parents are not Netscape devotees and have never figured out how to download goods; they simply bought the interactive version of *Just Grandma and Me* put out by Brøderbund. That CD-ROM, like a paperback, has been "published" and is therefore subject to a first sale defense.[80] So Leora can give it to Yonah now. But when Yonah tries to boot up for the first time — in fact, even when Leora herself boots up for the first, seventeenth, and hundredth time — a copy must be made in the computer's memory, in order to display the text on the screen. Taking literally the conclusion that a RAM-scan implicates the copyright owner's reproduction right, thus permitting it to charge a new fee, does seem like nothing other than a RAM-scam. To avoid that conclusion, we must turn to another aspect of the matter.

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78. The goal of purchasing an electronic book is to acquire everything that is present in the tangible book, and then some. *See* Samuelson, *supra* note 19, at 695. Yet, as we shall soon see, netizens acquire less than the rights of a paperback purchaser, when the first sale doctrine is factored into the equation. *See infra* note 80 and accompanying text.

79. *See* Robert L. Dunne, *Deterring Unauthorized Access to Computers: Controlling Behavior in Cyberspace Through a Contract Law Paradigm*, 35 JURIMETRICS J. 1, 3 (1994) (defining this term).

80. We have already partially seen how the first sale doctrine has evolved over time. *See supra* notes 72-74. The Computer Software Rental Amendments Act of 1990 extended the ban on rental, leasing, and lending of phonorecords (*see supra* note 74) to computer software as well. *See* 17 U.S.C. § 109(b)(1)(A) (1994); *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[B][8]. The effect of that last amendment on the CD-ROM version of *Just Grandma and Me* is that, like a book, the disc can still be sold or trashed, as well as lent to friends without direct or indirect profit motivation. The question whether the CD-ROM can be rented, by contrast, depends on an unlitigated distinction — is its embodiment of the literary work predominant, in which case it could be put on the shelves of a commercial lending library; or does its incorporation of computer coding for navigation make it as ineligible for rental as a product that contains software alone?

B. Is It Universal?

Turning to the second question, is the specter of publishers wielding a right a control browsing universally applicable? Some claim that publishers will have an incentive to post a new charge every time a user boots up, given that each such boot-up constitutes a new act of reproduction.[81] That would indeed constitute a most pronounced type of double-dipping. The question arises of how widespread that phenomenon will become.

1. Implicit Licenses

Let us posit for a moment that you have purchased the CD-ROM edition of *Nimmer on Copyright*. Positing further that you choose to access section 13.02 (discussing the copyright doctrine of access), can the publisher of the CD-ROM, Matthew Bender & Company, sue you for copyright infringement for engaging in that act of reproduction into your computer RAM? Of course not.

Why not, given that we have here a literal act of reproduction? Because any sane observer of the copyright scene would say that this reproduction activity has been implicitly licensed and is therefore noninfringing. By contrast, if a pirate were to access section 13.02, then the holding of *MAI v. Peak* would render that conduct copyright infringement.[82]

In other words, what we need here is some common sense.[83] But what is the reply to the observation that sense is anything but common? Sense and Sensibility — we need sensitivity to the underlying business realities that lead to transactions in copyrights and copyrightable goods. To distinguish between the two radically different situations posited above, we must recognize the *implicit licenses* that exist in the law of copyright. By virtue of the business transaction that led to ownership of the CD-ROM, the buyer of *Nimmer on Copyright* has an implicit license to boot up; Jolly Roger does not.

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81. *See* Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134.

82. *See supra* text following note 50.

83. Admittedly, that commodity is sometimes in perilously short supply in the copyright world. *See infra* text accompanying notes 86, 111; *see also* Jessica Litman, *Copyright as Myth*, 53 U. PITT. L. REV. 235, 237 (1991) (characterizing copyright law as "tremendously counterintuitive"); Litman, *supra* note 38, at 51 n.106.

2. Critique of *MAI* v. *Peak*

Turning this lesson directly to the facts of *MAI v. Peak*, it is time to examine its squirrelly facts in more detail. The plaintiff, a hardware vendor, provided adjunct software to customers under a parsimonious license, limiting diagnostics to "three of [licensee's] bona fide employees," and explicitly providing that "[a]ny possession or use of the Software not expressly authorized under this License . . . is prohibited."[84] The defendant was a third party to the software licenses that ran diagnostics to do routine maintenance and emergency repairs on plaintiff's customer's computers.[85] En route to holding the defendant liable, the Ninth Circuit enunciated the glorious/infamous ruling that copying in RAM implicates the copyright owner's reproduction right.

For current purposes, the inquiry focuses on the ultimate holding of liability. Because defendant expended all its ammunition on the pertinent count of the complaint to a losing effort at contesting the proposition that loading software into RAM constitutes making a copy, the court never reached the issues where the plaintiff was more vulnerable. Those issues number three.

First, did the software licensees qualify as "owner[s] of a copy" of the underlying program, and thus have certain special rights under § 117?[86] These special rights allow owners to make copies when necessary to utilize the program. Assuming that plaintiff's customers in *MAI v. Peak* had purchased a tangible copy of the software (whether on tape, diskette, or CD-ROM), then those special rights should have been at play in this case. On the other hand, had the plaintiff simply rented out the tape containing the software for two weeks — and sent its representative to retrieve the tape at the end of the rental period — then those special rights did not ripen into actuality.[87] Which facts actually pertained in *MAI v. Peak*? It is impossible to say, given the court's failure to advert

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84. 991 F.2d at 517 n.3.

85. *See id.* at 513.

86. 17 U.S.C. § 117 (1994) (according rights to make new copies and adaptations either as an essential step in utilization of program or for archival purposes). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.08. Query whether this statutory provision illuminates Prof. Litman's argument concerning the right to read, by its structural recognition that absent explicit statutory lenity, the copyright owner could forestall purchasers of software from using it. *See* Litman, *supra* note 38, at 51 n.106.

87. When Congress implemented 17 U.S.C. § 117 in 1980, it adopted wholesale the recommendations of the Commission on New Technological Uses of Copyrighted Works (CONTU) with one solitary exception — the use rights of the statute were limited to rightful "owners" rather than, as CONTU, had recommended, lawful "possessors." NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 12. Thus, the renter would have been privileged under the recommended language, but is not under the legislation ultimately enacted.

to the crucial distinction between ownership of physical copies and ownership of copyright interest.[88] Instead, the court summarily concluded that because plaintiff "licensed its software, [defendants] do not qualify as 'owners' of the software and are not eligible for protection under § 117."[89] What does "licensed its software" mean? I suspect (though the opinion's ambiguity does not allow for more than suspicions) that had the licensee chosen to use the disks or CD-ROMs on which the software was delivered as door jambs, landfill,[90] or (absent blank floppies in a pinch) deleting the software and re-using the disks to store vital company documents, the copyright owner would not have been heard to complain, inasmuch as its intent was to sell those physical media outright. If that suspicion is correct,[91] then the court's deficient logic[92] led it to reach exactly the wrong result under section 117. It therefore remains an open question whether the defendant could take shelter in authorization from its customers, who purchased the software at issue from the plaintiff.[93]

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88. *See* 17 U.S.C. § 202 (1994).

89. 991 F.2d at 518 n.5.

90. As previously noted, the first sale doctrine gives the purchaser of a tangible copy the right to demolish that copy, without implicating the copyright owner's rights. *See supra* text accompanying note 72.

91. It is almost becoming the norm for computer copyright cases to mangle the vital distinction between copyright ownership and ownership of a physical copy, notwithstanding the clearest statutory mandate to separate the two. *See* 17 U.S.C. § 202 (1994). Another example is the Ninth Circuit's reference, in a subsequent case, to plaintiff's "licensing rather than selling its software." Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330, 1333 (9th Cir. 1995), *cert. denied*, 116 S. Ct. 1015 (1996). Given contemporary business realities, it is likely — although impossible to ascertain from the face of the opinion, which ignores the first sale defense — that the plaintiff *sold* physical media incorporating *licensed* software. Assuming that scenario to be accurate, then the defendant should have been afforded the full scope of that first sale defense, which might have led to a victory. Also very wide of the mark is Microsoft Corp. v. Harmony Computers & Electronics, Inc., 846 F. Supp. 208 (E.D.N.Y. 1994), *criticized in* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[B][1].

92. It is not nearly as bad, however, as another opinion involving the same party which asserts that "[§] 117 only permits 'the owner . . . of a computer program to make or otherwise authorize the making of another copy'," thus "MAI's customers are not 'owners' of the copyrighted software; they possess only the limited rights set forth in their license agreements." Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp., 845 F. Supp. 356, 367 (E.D. Va. 1994) (ellipsis in original). The court's ellipsis omits the crucial words "of a copy" from its quotation of the statute, thereby subverting the meaning of the quoted phrase into the opposite of what Congress intended! *See* 17 U.S.C. § 117 (1994); 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.08[B][1].

93. "Moreover, the [§ 117 archival] exemption grants the right not only to make another copy of the computer program, but to 'authorize the making' of another such copy. Therefore, the licensee of a program who owns a diskette in which such software is embodied may rely on a third party to engage in the subject acts of copying." 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.08[B][1] (footnotes omitted).

Second, is running a diagnostic on duly licensed software under exigent circumstances as defensible a fair use as is reverse engineering?[94] The court does not address the issue. Meanwhile, Rep. Moorhead has introduced a bill in Congress to clarify that § 117 provides a safe harbor for copies made in the course of maintenance or repair.[95] Quite arguably, Rep. Moorhead's handiwork would have been unnecessary under a sensible construction of the fair use doctrine as applied to the emergency diagnostic services that the defendant in *MAI v. Peak* was called upon to perform.

Third, did the plaintiff in *MAI v. Peak* commit copyright misuse? As in this case, it not infrequently arises that a seller of hardware tries to obtain an effective monopoly over servicing of that hardware through a restrictive license on the software used with its system.[96] A party who offers both hardware and software should be construed to have conveyed an implicit license[97] to engage in diagnostics of that software in order to make it function appropriately on the licensee's machine. Under the expansive reading of implied licenses counseled above, the Ninth Circuit perhaps should have ruled the other way.[98]

On the other hand, such a ruling based on an implied license may have been impossible on the facts actually presented to the court in *MAI v. Peak* — the plaintiff extorted an *explicit* license not to engage in the diagnostic conduct. At this juncture, the doctrine of copyright misuse comes into play.[99] The doctrine is still undeveloped, inasmuch as only

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94. *See infra* text accompanying note 196.

95. H.R. 1861, 104th Cong., § 7 (1995).

96. This issue of whether a software proprietor commits misuse through requiring its customers to execute a license that prevents competitors from service and maintenance of its computer system has become one of recurring application. *See, e.g.*, Tricom, Inc. v. Electronic Data Systems Corp., 902 F. Supp. 741, 745 (E.D. Mich. 1995); Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330, 1333 (9th Cir. 1995), *cert. denied*, 116 S. Ct. 1015 (1996).

97. *Cf.* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 10.11 (discussing the implied covenant of good faith by which the party licensing a copyright will not use any reserved rights in the work in a manner that would diminish the benefits of the licensee).

98. Most courts in which this issue of monopolizing the diagnostic market arises have, like *MAI v. Peak*, ignored it. Other courts have denied that misuse exists under those circumstances. *See* Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp., 845 F. Supp. 356, 366-67 (E.D. Va. 1994); Triad Sys. Corp. v. Southeastern Express Co., 31 U.S.P.Q.2d 1239, 1249 (N.D. Cal. 1994) (citing Service & Training, Inc. v. Data Gen. Corp., 963 F.2d 680, 690 (4th Cir. 1992), *aff'd in part, rev'd on other grounds*, 64 F.3d 1330 (9th Cir. 1995), *cert. denied*, 116 S. Ct. 1015 (1996)). Yet none articulates a satisfactory formulation of what constitutes misuse in order to find the conduct outside its scope.

99. *See* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 13.09[A].

one case has ever crafted relief based on its existence.[100] In that case, the plaintiff held a valid copyright, which Congress provided would subsist for 75 years; but as a condition to licensing its work, plaintiff required its licensees not to engage in competitive behavior for 99 years — longer than the period that Congress had provided.[101] The Fourth Circuit held that such misuse of the copyright barred enforcement of any rights thereunder until such time as plaintiff purged itself of that misconduct.[102] How does that principle apply to *MAI v. Peak*?

Extending the legitimate monopoly over reproduction, adaptation, and public distribution of copyrighted software into a bar on anyone else performing diagnostics of errors on a machine seems, at first blush,[103] overreaching.[104] In other words, Congress has explicitly given owners

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100. *See* Lasercomb America, Inc. v. Reynolds, 911 F.2d 970 (4th Cir. 1990). A very recent decision, however, comes close. In DSC Communications Corp. v. DGI Technologies, Inc., 81 F.3d 597, 601 (5th Cir. 1996), the court affirmed the contours of the preliminary relief afforded below on the basis that the defendant would likely show copyright misuse.

101. *See Lasercomb America*, 911 F.2d at 978-79.

102. *Id.* at 979 n.22.

103. Prof. Hardy forcefully disagrees. "Why should consumers not be able to waive their rights just as owners can waive theirs? Are buyers of copyrighted works thought to be congenitally inferior in brain power or ability to exercise self-interest than sellers? I don't see any reason that that would in general be true." Letter from Trotter Hardy, Marshall-Wythe School of Law, to David Nimmer (Oct. 31, 1996) (on file with the *Harvard Journal of Law and Technology*). He may be right; I certainly cannot disagree with his assessment of "brain power" as a measure of the comparative intelligence of copyright licensors and licensees. But in the context of this Article's extended treatment of brains, perhaps it is worth noting that the operative distinction comes in terms of power — copyright owners are given power by virtue of a congressionally-sanctioned monopoly; users are safeguarded under the same statute by at least some congressional solicitude for their interests (e.g., the fair use doctrine, limited terms, § 117). The proprietor's use of her property power to force a user to forego the rights that Congress intended him to have is the evil against which the misuse defense is aimed.

104. It is possible that a deeper examination into the issue would prove that conduct harmless. But the court in *MAI v. Peak* did not even confront the issue. To initiate the inquiry, consider that in Digidyne Corp. v. Data General Corp., 734 F.2d 1336 (9th Cir. 1984), the Ninth Circuit held it an antitrust violation for the defendant to license its operating system only for use on its own computers, thereby short-circuiting would-be clone makers. *See id.* at 1341 (citing United States v. Loew's, 371 U.S. 38, 45 (1962), and relying on the presumption that possession of copyright on tying product confers market power). But other courts have rejected that aspect of the Ninth Circuit's holding. *See* A.I. Root Co. v. Computer/Dynamics Inc., 806 F.2d 673, 675-77 (6th Cir. 1986) (case also involving MAI as codefendant); Will v. Comprehensive Acct'g. Corp., 776 F.2d 665, 672-73 & n.4 (7th Cir. 1985); Flavio Rose, *Fifth Circuit Adopts Copyright Misuse Defense*, NEW MATTER, Fall 1996 (forthcoming). According to the judge who authored *Will*, "[a]lmost everyone else . . . reject[s] that view [of Digidyne] and [holds] that intellectual property is just like other property." Frank Easterbrook, *Intellectual Property is Still Property*, 13 HARV. J. L. PUB. POL. 108, 113 n. 18 (1990). Yet time will tell whether DSC Communications Corp. v. DGI Technologies Inc., 81 F.3d 597 (5th Cir. 1996), has turned

of tangible copies of software the right to make copies of that software "as an essential step in the utilization of the computer program in conjunction with a machine. . . ."[105] When a customer needs diagnostics to be performed in order to make the machine as a whole function properly, any copy required to be made of the software would seem to be "an essential step in the utilization of the computer program." [106] Requiring customers to forego by contract the right that Congress accorded them by statute, if the above principle is correct,[107] constitutes misuse.[108] Therefore, without questioning the basic proposition of *MAI v. Peak* on which the White Paper is founded (copying to RAM = reproduction), the ultimate judgment in that case very likely should have gone the other way under a more refined application of the law.[109]

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the law away from those latter rejections by enunciating a bright-line rule under copyright law that condemns the tying of hardware to software with no inquiry into market power. *See infra* note 108.

105. 17 U.S.C. § 117(1) (1994).

106. *Id.*

107. *See id.* Parallel reasoning would hold that conditioning a license on an agreement not to engage in reverse engineering — a right that, when undertaken properly, is guaranteed to the world under the fair use doctrine, *see infra* text accompanying note 196 — would constitute misuse under this view.

108. In DSC Communications Corp. v. DGI Technologies, Inc., 81 F.3d 597, 601 (5th Cir. 1996), the court ruled that the defendant stated an appropriate misuse defense by showing that the plaintiff's proposed construction of the Copyright Act would prevent the defendant from committing acts of software reproduction that were essential for the proper competitive purpose of developing a competing microprocessor card. By analogy, the defendant in *MAI v. Peak* could have stated an appropriate misuse defense by showing that plaintiff's proposed construction of the Copyright Act would prevent defendant from committing acts of software reproduction that were essential for the proper competitive purpose of performing hardware diagnostics.

109. As noted *supra* note 98, existing cases are largely *contra*. *But see supra* note 108. (explaining how the misuse defense could be stated properly by the defendant). To cite a recent example, one court rejected a challenge against Xerox Corporation for squelching competitive maintenance of Xerox machines by independent service organizations ("ISOs"). In re Independent Serv. Orgs. Antitrust Lit., 910 F. Supp. 1537 (D. Kan. 1995). Acknowledging that the Supreme Court "has held many times that power gained through some . . . legal advantage such as a . . . copyright . . . can give rise to liability if a seller exploits his dominant position in one market to expand his empire into the next," *id.* at 1543 (quoting Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 479 n.29 (1992) (internal quotation marks omitted)), the court nonetheless declined to hold that exorbitant pricing by itself would amount to an antitrust violation, even if expressly "aimed at snuffing out ISO competition." *Id.* at 1542-43.

Without exploring the matter fully, it seems that such a construction overly constricts the misuse defense. The court evidently believed that even if the ISOs affirmatively demonstrated an antitrust violation, they still would establish no copyright defense. *Id.* at 1543-44, 1545 n.1. By contrast, *Lasercomb* recognizes a violation of the antitrust laws as a sufficient, but not even always necessary, ingredient of the misuse defense. *See* Lasercomb America, Inc. v. Reynolds, 911 F.2d 978 (4th Cir. 1990); 3 NIMMER ON COPYRIGHT, *supra* note 25, § 13.09[A].

3. *Red Baron* Attack

The failure to appreciate implicit licenses explicated above brings us to the Fourth Circuit's decision several years back in *Red Baron-Franklin Park, Inc. v. Taito Corp.*[110] A Japanese videogame manufacturer segregated the national markets for its consoles, but one videogame found its way to a U.S. arcade via the Japanese gray market. The court held that the manufacturer's right to control distribution was extinguished by the first sale doctrine (upon being first sold in Japan). Nevertheless, the Court of Appeals found infringement of the manufacturer's right to control public performance, i.e., the placement in the arcade. To appreciate how remarkably struthious this ruling is, one need simply reflect that the court found the defendant liable for using a video console for its sole conceivably intended purpose (other than perhaps decorating Michael Jackson's home). In other words, the court held that using an arcade video console in an arcade of video consoles constitutes copyright infringement.

Congress was forced to get into the act (in fact, into the Act) and repeal the *Red Baron* holding.[111] The amendment was passed on an interim basis as an experiment and hence expired on October 1, 1995.[112] On that latter date, Congress failed to renew it. Was it because experience with the amendment proved it defective? By no means. The reason is that everyone in Congress was apparently asleep, such that no one bothered to monitor the results of the experiment. Nonetheless, notwithstanding that the corrective amendment has expired, the case itself is so poorly reasoned that its holding should be rejected, and the opposite result should be construed as the law. The Fourth Circuit, in other words, should have found when the case initially arose that the conduct at issue had been implicitly licensed through sale of the software

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110. 883 F.2d 275 (4th Cir. 1989).

111. *See* 17 U.S.C. 109(e) (1994). This provision applies to the first sale doctrine, carving out an exception from the copyright owner's public performance and public display rights. *See id.* But we saw previously that the first sale doctrine was designed to exert no control over the public performance right, instead being limited to qualitatively different rights. *See supra* notes 72-73. The explanation for this anomaly is that the Fourth Circuit's misreading of copyright law forced Congress to distend the first sale doctrine. Thus does one deformation beget another.

112. Judicial Improvements Act of 1990, Pub. L. No. 101-650, § 804(c), 104 Stat. 5089, 5134 (1990) (*See* 17 U.S.C.A. § 109 (West Supp. 1996) ("The amendments made by section 803 [enacting subsec. (e) of this section] shall not apply to public performances or displays that occur on or after October 1, 1995." (alteration in original))). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.15[I].

embodied into the video console and, upon that basis, should have ruled in favor of the defendant.[113]

In sum, in examining the question whether this right to read is universally applicable, a judicious application of the doctrine of implied licenses — combined with rejection of overreaching contrary explicit licenses on the grounds of misuse — can result in a broad construction defeating the copyright owner's right to control reading, even under current doctrine.[114]

C. Is It Ineluctable?

Even if the White Paper's vision were enacted *in toto* tomorrow, would the public lose its current browsing capability? We have already seen that legally the public would lack a right to browse under the White Paper regime; but we have also seen that there is currently no such right. Therefore, enactment of the White Paper proposal would not produce an operative legal change in this regard.[115]

Departing from legality and investigating practical consequences, browsing from a practical standpoint need not be adversely affected — in other words, the incidence of authorized browsing in an Internet environment need not necessarily be any less than it is at bookstores today. We have to lean way over in our chairs to appreciate this perspective.[116]

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113. By the same token, Rep. Moorhead's bill to amend 17 U.S.C. § 117 in order to negate the effect of *MAI v. Peak* is arguably unnecessary, absent an antecedent mistaken judicial ruling. *See supra* note 95.

114. More technically phrased, the copyright owner should not be recognized as having the right to control reading of a work under circumstances in which such incidental reproduction as occurs incident to reading is a necessary concomitant of normal exploitation of the work.

115. Nonetheless, it must be conceded that a large operative legal change would occur as to published works, given the facial inapplicability of the first sale doctrine to cyberspace. *See supra* text accompanying note 80.

116. Not wanting to overstate the case, the argument in the text is that change need not inexorably occur in the incidence of browsing. This is not to deny the contrary possibility — that copyright owners would hold the reins of ownership far more tightly in cyberspace than meatspace's application of the first sale doctrine permits. Our task in confronting the future lies closer to guessing than to mulling over empirical evidence. *See infra* text accompanying note 159. Thus, while one can spin scenarios to prove that the death of browsing is not an ineluctable fact of cyberspace, one can neither prove nor disprove the prediction that it will turn out to be the practical consequence of the White Paper's wired world. I simply happen to take most predictions with a beach of salt. *Cf.* Krattenmaker & Powe, *supra* note 6, at 1724 ("Twenty-five years ago many of the same predictions we hear today for the infobahn — the interconnected grid of emerging telecommunication technologies — were made for cable television.").

Movie studios offer the first few minutes of film-watching free to viewers in hotel rooms. They hope that the viewer will become hooked and pay the full tariff to watch the whole movie. Record companies of the future can adopt the same methodology: Listeners could experience Hootie & the Blowfish's current hit for free; afterwards, the record company would "sell"[117] the whole album for the standard fee.[118]

Book publishers may upload volumes and encourage digital browsing. Chapter one could be read for free, and those readers who are sufficiently intrigued could pay for the rest. Alternatively, the publisher could make any 20 pages of the reader's choice available for free. Or the publisher could make the entire book available for free, but only for one-half hour, and charge for "ownership" of the book.[119]

The death of browsing is no more an inherent part of online life than it is of meatspace. For that reason, no ineluctable change need occur to the right to read.

D. Is It Unprecedented?

The Copyright Act accords only five rights: reproduction, adaptation, public distribution, public performance,[120] and public display.[121] A sixth right — the "right to control reading" — is posited as a misshapen monstrosity foisted upon a pristine statutory scheme by the White Paper's misreading. Under that view, this new right is indeed a bitter herb best excluded from sensible canons of statutory construction.

Congress created five rights; new rights cannot be created absent congressional action. Therefore, the syllogism concludes, this new right

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117. Just as copyright's first sale defense is bound up with tangible goods (bound books being the paradigmatic example), so the linguistic sense rebels against a "sale" when nothing changes hands. If Avi has paid money for the right to unlimited access to a website featuring a volatile copy of Beverly Sills singing the title role in *Maria Stuarda*, has he really "bought" that recording of the opera? *See* Jaap H. Spoor, *The Copyright Approach to Copying on the Internet: (Over)Stretching the Reproduction Right?*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 67, 77 (P. Bernt Hugenholtz ed., 1996) ("[T]he reproduction right's success in practice may at least be enhanced where reproductions are truly tangible objects.").

118. *See* Volokh, *supra* note 70, at 1811, 1818-19.

119. *Cf.* Samuelson, *supra* note 19, at 699 (noting that Compton's electronic encyclopedia has built-in "fair use" monitor, allowing users to print maximum of five textual entries per session).

120. The public performance right was recently bifurcated when a separate species of public performance right *via* digital transmission was conferred on sound recordings. *See* 17 U.S.C. § 106(6) (1994) (added by the amendment cited *supra* note 24). But that digression does not implicate the current analysis.

121. 17 U.S.C. § 106 (1994).

to read must be expurgated from the law, and the White Paper's approach cannot stand.

I beg to differ.

The statute already contains rights beyond the five-fold enumeration: rights undreamed of even by the copyright sophisticate. Very few of them, I venture to guess, have ever heard of the right to erase.[122] Yet it exists nonetheless in the interstices of the Act. Consider several manifestations:

(1) My niece attends the University of Wisconsin. Imagine that she goes to the campus library and rents a copy of an *Excel* spreadsheet or *WordPerfect for Windows*. To do anything other than admire the diskettes for their contours and heft, she must load them into her computer. Once she does so, she will have reproduced them into RAM. That activity is specifically permitted by law as the Computer Software Rental Amendments Act of 1990 was drafted to permit educational rentals.[123]

Two weeks later, my niece complies with the law by returning the software package to the library. But what about the copy previously loaded into her computer's memory? The statute is silent as to its disposition. I would contend that were my niece to continue to exploit that copy in her RAM, she would be acting outside the statutory safe harbor that allows university libraries and students to engage in the course of conduct described above. In other words, my niece is required to *erase* the material that exists on her computer. This is the first instance of the statutory penumbra containing the right to erase.[124]

(2) My wife was saddened when her favorite comedian, George Burns, passed away recently. Let us imagine that among the venerable

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122. In the French tradition, the author's moral rights include the right to recall works no longer representative of her point of view. *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8D.01[A]. That *droit de repentir* could be conceptualized as very loosely akin to the right to erase. In any event, however, this retraction right is the least recognized among moral rights internationally; it is also subject to the qualification that the retracting author must pay full compensation for pulling back interests that were previously granted, which differentiates it from the right to erase posited above. *See* Jeffrey M. Dine, Note, *Authors' Moral Rights in Non-European Nations: International Agreements, Economics,* Mannu Bhandari, *and the Dead Sea Scrolls*, 16 MICH. J. INT'L L. 545, 554. (1995).

123. Computer Software Rental Amendments Act of 1990, 17 U.S.C. § 109(b)(1)(A) (1994). We have previously encountered the changes to the first sale doctrine that this amendment effectuated. *See supra* note 80.

124. I am grateful to the Copyright Office for sparking my interest in the right to erase as it arises here. *See* Acting Register of Copyrights, *The Computer Software Rental Amendments Act of 1990: The Nonprofit Library Lending Exemption to the "Rental Right,"* 41 J. COPYRIGHT SOC'Y U.S.A. 231, 283 (1994).

comedian's effects are found numerous videotapes — of works copied off the air and used solely for time-shifting purposes. That collection[125] is perfectly legal.[126]

The executrix for the estate now needs to find a way to pay taxes. She wishes to sell off personal property towards that end. May she sell the videotapes? To sell videotapes with embedded TV programs crosses over the line established by *Sony* — as commercial exploitation, it becomes infringing.[127]

Therefore, to sell off the tapes, the executor must first erase them. This is a second example of the right to erase.[128]

(3) A research scientist just can't wait to get his hands on the latest issue of the *Journal of Catalysis*. So excited is he upon receiving the current release that he copies three whole articles from it onto his hard disk and uses them for reference purposes during his current experiment.

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125. Given the assumption that each show was only watched once, calling the scattered videotapes a "collection" connotes more order than is warranted. In the hands of a more frugal viewer, the various videotapes would have been overtaped; the operative assumption here is that Mr. Burns had no such need.

126. *See* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984) (holding that home videotape recorders for private, noncommercial time-shifting of copyrighted television programs is legitimate fair use).

127. One could maintain the opposite — that videotapes made for time-shifting purposes were lawful when recorded, and that their owner's subsequent decision to re-purpose them cannot transmute them into contraband. Conduct may sprout like mushrooms in the dark spaces where copyright liability does not reach. *See* Litman, *supra* note 38, at 46. The question therefore becomes whether this particular conduct is to be encouraged as enhancing the public's exemptions, or discouraged as cutting too closely to the copyright owner's statutory rights. The argument validating sale of the George Burns videocassette collection would entail the result that video stores could simply stock their shelves with product that their shills made for time-shifting, notwithstanding a "decision" five minutes later to profit from that which the Supreme Court validated only for noncommercial exploitation. It strikes me that, to confront this unlitigated issue, courts should require erasure; to do otherwise loses sight of the fact that rulings on the scope of permissible behavior form part of the "geometry" by which actors gauge their future conduct. *See generally* Laurence H. Tribe, *The Curvature of Constitutional Space: What Lawyers Can Learn From Modern Physics*, 103 HARV. L. REV. 1 (1989) (arguing that the act of judging itself alters the context and relationships being judged).

128. Having used the phrase "right to erase" several times, it is time to note some inadequacies of that formulation. Just as the "right to read" implicates questions ranging from the proprietor's right to control reading to browsing in general, so the "right to erase" should be considered a shorthand for the owner's right under specified circumstances to mandate erasure — or at least non-use — of his work. For the sake of greater precision and parallelism with the other rights accorded under 17 U.S.C. § 106 (1994), perhaps a better formulation would be the "right to retain a copy." Given that I am offering this putative right as a thought experiment, not as an adjunct to legislation, I prefer the more evocative formulation.

The Second Circuit in *American Geophysical Union v. Texaco Inc.* indicated that the fair use doctrine does not protect this type of activity — *when the scientist kept those copies for archival purposes.*[129]

Now imagine that the scientist completes the experiment and thereupon immediately presses the "delete" key on his computer, thereby expunging those articles from the *Journal of Catalysis*, so that none exists in his computer memory for one instant after they're needed to facilitate the subject laboratory work. A good argument could be made that his exploitation is now fair use. So again, a copyright owner can enforce the right to erase in this third guise.[130]

If you have followed me on this exodus through these four questions, perhaps you will now agree that the danger from the right to read, while hardly nonexistent, does not inexorably exclude us from the promised land. In a spirit of hope, we can still proclaim — Next year in <http: //www.jer1.co.il>!

III. MATCHMAKER, MATCHMAKER

Even accepting the above defanging of the right to control reading, the initial inquiry remains: How can we form the more perfect union of multimedia and copyright law? Without attempting to formulate all the ingredients that will make the marriage prosperous and long, we can at least identify some of the components that, superstition teaches us, will propitiate the gods of fate on the wedding day: Something old, something new, something borrowed, and something blue.

A. Old and New

Let us consider the old and the new together. After all, we have little choice but to use yesterday's heritage as the launch point to address tomorrow's needs.[131] The trick is always in locating what part of the past, if any, should be considered analogous to the current situation. Although it is too soon to come up with definitive answers, it is not too soon to survey the terrain and ponder some tentative solutions.

Consider several examples:

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129. *See* American Geophysical Union v. Texaco, Inc., 37 F.3d 881, 887-88 (2d Cir. 1994) (distinguishing "spontaneous" copying for immediate use from "archival" copying to avoid purchase of an additional volume), *cert. dismissed*, 116 S. Ct. 592 (1995). The case involved infringement via photocopying, but the point survives the technology.

130. The text below posits a fourth (and fifth) guise of the right to erase. *See infra* note 137 and accompanying text.

131. *See* Lessig, *supra* note 49, at 1744; Hardy, *supra* note 19, at 996.

(1) Under old law, the recipient of a letter can show it to her friends, notwithstanding the author's copyright in the letter. The recipient's disposition (absent reproduction) of her tangible copy falls within the first sale doctrine.[132]

The new paradigm is e-mail. Moving from old to new, I suggest (with all the deliberate caution that a synecdoche requires[133]) that the recipient of e-mail should be able to "show" it to her friends by pressing the forward button. E-mail, when assimilated through this device to its pre-cyberspace forbear, would be put in a category in which it can be freely shared.[134] On that basis, the fear that those who share their e-mail will be hauled off to plagiarists' prison can be alleviated.[135]

(2) Another example concerns buyers of computer programs. Those who purchase diskettes and CD-ROMs onto which software has been recorded are clothed with rights under the first sale doctrine.[136] Unlike my niece, who could only use her rented software for two weeks, if my nephew were to buy a software package at Egghead and tire of it after a year, he could freely pass the diskettes that he purchased along to his friends. But he too would need to erase the volatile copy on his

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132. Except for COD missives, letters are sent gratis rather than for money. Accordingly, they were not subject to a first *sale*. The doctrine nonetheless embraces those latter letters; the abbreviated term "first sale" is therefore something of a misnomer. *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.12[B][3][b] ("The reference in the statutory text to 'the owner of a particular copy or phonorecord lawfully made under this title' would seem to suggest that any owner may claim such immunity, even if such ownership was not the result of a 'first sale' authorized by the copyright owner.").

133. "There are advantages — in familiarity, evocativeness, and tradition — to this particular kind of analogical reasoning. Nevertheless, it is hard to repress an occasional wish that the issue be framed as whether a specific type of regulation will help or hinder the creation or reproduction of a particular kind of society, rather than being filtered through an additional layer of simile and metaphor." BOYLE, *supra* note 36, at 113. *See* Ejan Mackaay, *The Economics of Emergent Property Rights on the Internet*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 13, 24 (P. Bernt Hugenholtz ed., 1996).

134. *See* Hardy, *supra* note 19, at 997, 1009 (questioning whether "some sort of estoppel or implied waiver of copyright rights arise"). When postings are made to a listserv, an advance authorization by contract could be invoked to solve the issue. *Id.* at 1030-31.

135. *See generally* Samuelson, *supra* note 81, at 134 (predicting ruinous enforcement of copyright laws on the Internet under The White Paper). On the other hand, the opposite result may eventuate. To the extent that the rationale for allowing recipients to share letters with friends is that the resulting dissemination will likely prove minimal, then a court moving from old to new might reach the opposite result when confronted with the havoc that widescale dissemination of forwarded e-mail could wreak.

136. As previously noted, their rights to utilize, transfer, or discard the copies that they own are unbounded; their rights to rent or lend such copies are limited by statute. *See supra* note 80.

computer in order to do so, thus invoking yet another example of the right to erase.[137]

To invoke the first sale defense under old law, a physical transfer was necessary. Thus, the netizen[138] who downloads software is not clothed with comparable rights. But when we apply this scenario to the new situation, authorized downloaders of software arguably should obtain the same rights as did purchasers of the software at Egghead.[139] So arises another exception to the general rule of *MAI v. Peak* that on-line copies constitute actionable reproductions. Specifically, the argument is that a type of volatile first sale doctrine should protect reproductions made in the RAM of a person who has received another's download lock, stock, and barrel.[140]

(3) Evaluating the new in the context of the old, no issue has raised more contention than how to assess the responsibility of an Internet Service Provider ("ISP") for copyright infringement that occurs through its operations.[141] For this aspect of the exercise, we must bear in mind that copyright law has developed various doctrines geared at safeguarding authors and authors' rights. Some examples are strict liability of infringers and joint and several liability by contributory infringers. Traditional copyright law holds that infringement is a strict liability

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137. 17 U.S.C. § 117(2) (1994) ("[A]ll archival copies [must be] destroyed in the event that continued possession of the computer program should cease to be rightful."). *See* 2 NIMMER ON COPYRIGHT, *supra* note 25, § 8.08[C]. In addition to the three instances posited by the text above, this statutory provision furnishes a fourth example of the right to erase, this one explicitly set forth in the statute. A similar provision mandating destruction is contained in the Act's provision for ephemeral recordings, albeit in this instance preservation for archival purposes defeats mandatory destruction. *See* 17 U.S.C. § 112(a)(3) (1994). This Article contents itself with these five exemplars of the right to erase, although undoubtedly more could be conjured up.

138. *See* Anne Wells Branscomb, *Anonymity, Autonomy, and Accountability: Challenges to the First Amendment in Cyberspaces*, 104 YALE L.J. 1639, 1639 (1995) (defining this term).

139. Another conceptual issue of tremendous complexity lurks here — what is the effect of the shrink-wrap license in which the box was wrapped when the customer at Egghead purchased it? *See* ProCD, Inc. v. Zeidenberg, 908 F. Supp. 640 (W.D. Wis. 1996), *rev'd*, 86 F.3d 1447 (7th Cir. 1996). For current purposes, I am side-stepping that vital inquiry.

140. *See supra* note 28. The argument works only if, simultaneous with the recipient's acquisition of the reproduction, the transferor expunges it from her machine (confronting us again with our now-familiar friend, the right to erase). But even on that assumption, the scheme arguably should not apply to "cbooks" because a used cbook is not inferior to the original. *See supra* note 77. "Authors could legitimately complain that allowing sales of used electronic books will cost them much more than allowing sales of used paper books does today." Volokh, *supra* note 70, at 1841.

141. *See* Jane C. Ginsburg, *Putting Cars on the "Information Superhighway": Authors, Exploiters, and Copyright in Cyberspace*, 95 COLUM. L. REV. 1466, 1492-94 (1995).

offense — it can take place even without knowledge.[142] Given infringement, parties can be held vicariously liable for financially benefitting from the transaction, again even without knowledge.[143]

The application of vicarious liability rules to cyberspace may ensnare many ISPs who merely pass along infringing material completely unaware of its content. This phenomenon will be particularly troublesome when the infringing posting can only be traced as far back as an anonymous remailer, such as Johan Helsingius' in Helsinki.[144] The primary infringer is thus virtually unknowable,[145] and without even looking to deep pockets, the only pocket amenable to suit is the ISP. Thus arises the specter of massive lawsuits against the ISPs of the world, suffocating the Net through the blind flailing of pre-cyberspace principles.

To avoid killing the goose that lays the golden egg, some advocate crafting new rules holding the ISP immune. The champions of free commerce in cyberspace point to the injustice of holding the erstwhile ISP liable for conduct that it not only knows nothing about, but cannot even control.[146]

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142. In one case involving the Church of Scientology's copyright, Judge Whyte constructed the novel defense to liability that, even though a defendant may be held culpable absent knowledge, "there should still be some element of volition or causation which is lacking where a defendant's system is merely used to create a copy by a third party." Religious Tech. Center v. Netcom On-Line Comm. Servs., Inc., 907 F. Supp. 1361, 1370 (N.D. Cal. 1995). The judge relied extensively on Fonovisa, Inc. v. Cherry Auction, Inc., 847 F. Supp. 1492 (E.D. Cal. 1994), *rev'd*, 76 F.3d 259 (9th Cir. 1996). The Ninth Circuit's subsequent reversal of that latter case arguably portends a liberalization of the standards for vicarious liability in cyberspace. *See Fonovisa*, 76 F.3d at 262-63. Note that this particular issue will not recur before Judge Whyte, given the parties' settlement in *Netcom*. *See Church of Scientology and Netcom Reach Settlement in Copyright Dispute*, COPYRIGHT L. REP. (CCH) No. 221, at 3-4 (Aug. 29, 1996).

143. *See* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 12.04[A][1].

144. Mr. Helsingius has garnered a good deal of notoriety for maintaining his anonymous remailer, <anon.penet.fi>. *See* George P. Long, III, Comment, *Who Are You?: Identity and Anonymity in Cyberspace*, 55 U. PITT. L. REV. 1177, 1183-85 & n.28 (1994); Branscomb, *supra* note 138, at 1659-60. The Finnish police conducted a raid of his service at the behest of the Church of Scientology in search of material infringing the church's copyright. *Id.* at 1661 n.97. *See* cases cited *supra* note 142 and *infra* note 174.

145. A different way to solve this problem would be through the technology of encoded tags or mandatory digital trails. *See* Paul Mallam, *Copyright and the Information Superhighway: Some Future Challenges*, 6 ENT. L. REV. 234, 236-37 (1995). But any proposed solution must be scrutinized first from a technical perspective, to determine if it will work, and then from a legal perspective, to determine if its efficacy would be increased by prohibiting technical circumvention of the means devised (which returns us recursively to the first inquiry).

146. *See* Elkin-Koren, *supra* note 38, at 410; Kevin M. Cox, Note, *Online Service Providers and Copyright Law: The Need for Change*, 1 SYRACUSE J. LEGIS. & POL'Y 197 (1995). One contrary perspective is that an ISP is more like the dance hall owners whom copyright law has held vicariously liable for decades. *See* Carter Kirkwood, *Under Which*

There is much to commend that point of view.[147] At the end of the day, its logic may prove irrefutable. But the day has not yet ended.[148] As much as this new approach would safeguard the ISP, it threatens to leave authors without a remedy. Concluding that only the anonymous *initial* mailer — whose identity by definition will never be known — must pay for infringement risks that no one will ever pay for infringement.[149]

One could argue that ISPs should be analogized to newspapers,[150] to shopping malls,[151] to book stores,[152] to cable television,[153] or to telephone companies and other common carriers.[154] But at this point, the utility of pre-cyberspace metaphors breaks down, as the analogies obscure more than they reveal. One can simultaneously acknowledge the old as the only jumping-off point for confronting the new, yet still desist from allowing archaic modalities to rule us from the grave.[155]

There is some validity to each side in this argument. No one wishes to condone auriferousansericide. But neither is it appealing to tell authors that they are remediless. What is needed, therefore, is empirical investigation — is it economically possible for ISPs to distribute the

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Theory Should Computer Owners Be Liable for Copyright Infringement by Their Users?, 63 U. CHI. L. REV. (forthcoming 1996).

147. One commentator has already decided that strict liability "would effectively exclude the majority of the smaller sysops" from operation. "Liability insurance would be prohibitively expensive, the burden of monitoring all messages before posting them too demanding, and the possibility of facing protracted litigation too onerous." Branscomb, *supra* note 138, at 1671.

148. I share the assessment that it is "far too soon to offer particular judgments." Cass R. Sunstein, *The First Amendment in Cyberspace*, 104 YALE L.J. 1757, 1796 (1995). *See also* note 49.

149. One commentator concludes that governments might require the abolition of anonymous remailers. *See* Hardy, *supra* note 19, at 1050-51. In terms of <anon.penet.fi> (*see supra* note 144), decommissioning in fact occurred in short order. *See* Amy Harmon, *Internet Figure Pulls Plug On His Anonymity Service*, L.A. TIMES, Aug. 31, 1996, at A1 (reporting that Helsingius closed his service in response to a Finnish court decision which, according to Helsingius, would force him to reveal the identities of mailers alleged to have posted copyrighted material). Yet that which was salutary in the view of some copyright commentators provoked consternation among British suicide prevention clinics. *See id.* Thus do a welter of conflicting interests clash in these spheres.

150. *See infra* note 174.

151. *See, e.g.*, Pruneyard Shopping Center v. Robins, 447 U.S. 74 (1980).

152. *Cf.* Hardy, *supra* note 19, at 1003-04 (arguing persuasively that the courts "should be uneasy about relying on generic 'bookstore' analogies").

153. Note that the 1976 Act already contains a passive carrier retransmission exemption to vicarious liability or contributory infringement. *See* 3 NIMMER ON COPYRIGHT, *supra* note 25, § 12.04[B][3].

154. Avi faxes a copyrighted poem to Talia. Is Pacific Bell culpable for copyright infringement? What if some of the buffers on a digital phone line create a RAM-like copy for a period of more than transitory duration? If the telephone company offers voice-mail messaging, is it liable for infringing material thereby recorded?

155. *See supra* note 133.

costs of infringement over all of their customers or does the magnitude of that enterprise make it unworkable?[156] Can ISPs be enlisted as the "copyright police" or is such a prospect chimerical?[157] Everywhere we turn, the debate is joined.[158]

The empirical investigation that can help to resolve that debate takes time; so what are we to do in the interim? If we at least had some idea about the contours of the future, we could begin to tailor our legislation to it. But consideration of ISP liability confronts an inescapable problem — not only is it difficult to draw the appropriate lessons from the past to the present, but for the current exercise we are trying to govern the technology of the future. What that technology will be — indeed, whether the online service providers themselves will develop encryption, secure envelopes, and other means to attract copyrightable compositions onto their servers, compensate authors, and foil infringement in one fell swoop — is wholly unknown. Likewise speculative is whether the Internet will mature as a business tool far afield from copyright exploitation or as the primary vehicle for enjoyment of works of authorship: Will video-on-demand indeed become the holy grail of the next millennium, or will the public still prefer a huge screen in a darkened hall? Is access to the short story destined a decade hence (a) to become nonexistent as demand withers; (b) to remain unchanged from the current modes of bookstores, magazines, and libraries; or (c) to be accessed only off of computer screens?[159] Lawmakers of all varieties must humbly face the stark fact that we don't know the answers to any of those questions. As noted above, it is therefore premature at present to adopt new rules geared at this most slippery of issues, lest those rules themselves stunt

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156. How will customers react to that involuntary infringement tax? Will the dynamic differ from the "tax" that traditional book publishers already impose on their readers to defray infringement judgments?

157. Although real questions exist whether ISPs could ever gain enough information quickly enough to act as the "copyright police," in the interim, strict liability serves the goal of internalizing the cost of infringement. *See* Hardy, *supra* note 19, at 1007-08, 1044-45.

158. Another dilemma here inheres in the tension between different bodies of law. As discussed above, ISPs may wish to screen postings and control content in order to avoid copyright liability. But in order to avoid liability for defamation and obscenity offenses, ISPs have the opposite incentive: to relinquish editorial control, acting like a common carrier. *See* Allen S. Hammond, *Private Networks, Public Speech: Constitutional Speech Dimensions of Access to Private Networks*, 55 U. PITT. L. REV. 1085, 1091, 1117-18 (1994). Given that when a user uploads pornography to the ISP's server, the expression contained therein may simultaneously constitute pornography and copyright infringement, we have here the "horns of an almost insolvable dilemma." *See* Branscomb, *supra* note 138, at 1655. *See also* Long, *supra* note 144, at 1182 & n.26 (identifying this issue in <news: alt.binaries.pictures.erotica>).

159. *See supra* note 46.

technological growth.[160] The old wisdom, it would seem, counsels current restraint: *Above all, do no harm.*

B. A Borrower and a Lender Be

Proceeding now to "something borrowed," I would like to borrow the typology from Professor Jane Ginsburg as set forth in the title of her article in a recent issue of the *Columbia Law Review* — the challenge is to put cars on the information superhighway.[161]

The tractor-trailers of the infobahn consist of vast data compilations. Everything you ever wanted to know about coal production statistics in the 1950s outside of Vladivostok is presumably accessible, as an example.[162]

At the other extreme are the tricycles — as on my driveway, these trikes exist in frightening profusion. They are the e-mail messages, gazillions of which are whizzing by at every moment.

Intermediate between the trucks and the trikes come the cars. Under this taxonomy, those cars are works of qualitative authorship — *Home Alone*, for example, or *The Golden Gate*.

Viewed from the perspective of this trichotomy, we no longer need to search out the grand unified theory of one magic legal principle.[163]

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160. *See supra* note 49.

161. *See* Ginsburg, *supra* note 141.

162. *See* Sunstein, *supra* note 148, at 1781 ("If you have a question about sports or music or clothing, or about the eighteenth century, you could get an instant answer.").

163. In fact, maybe the magic solution lies outside of law altogether. It is fascinating to speculate whether copyright itself could be rendered obsolete by various technical fixes, such as copy-protection schemes. One would think that any lock thereby created could be defeated by a bootleg key. *See* ANNE WELLS BRANSCOMB, WHO OWNS INFORMATION? 90 (1994) ("Technical experts continue to believe that for every technological lock placed within the work product, there will be a pirate locksmith ready and willing to break in, if not for the financial reward, then merely for the joy of accomplishment."). But perhaps the future will witness the advent of the pick-proof lock. Alternatively, copyright owners in cyberspace could "have the power to identify and enforce what 'annuli' (rings of authorized user groups) will have what access to the work, when, and under what conditions." Samuelson, *supra* note 58, at 328. In the European Community, the IMPRIMATUR project, along with CITED and COPICAT, explore the same territory. *See* <http://www.mari.co.uk/copicat/>. *See also* David Voss, *Stop That Copy*, WIRED, Aug. 1994, at 34 (encoding documents with traceable serial number); MARK STEFIK, INTERNET DREAMS: ARCHETYPES, MYTHS, AND METAPHORS 224-38 (1996) (providing a comprehensive preview of digital publishing via trusted systems); Charles Clark, *The Answer to the Machine is in the Machine*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 139 (P. Bernt Hugenholtz ed., 1996).

Instead, we likely need three *different* answers to the question of what legal scheme[164] should protect works on the Internet.[165]

(1) As to the vast data compilations — the trucks — metering makes some sense.[166] In other words, one pays as long as the meter runs — say, *X* dollars per minute of song time, regardless of whether the song is a runaway hit or an obscure ditty, or *Y* cents per word, regardless of whether one is reading a juicy bestseller or a dry as dust textbook.[167] What matters here is access, not authorship. By a curious quirk, under copyright law today, the most comprehensive, and hence the best, data collections already lie outside copyright protection.[168] But the case that reached that result simultaneously acknowledged that such compilations could be regulated in spheres outside of copyright.[169] So perhaps what would work here is a law of access plus payment. If this metering scheme were to be adopted, it would be an acknowledgment that

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164. As contrasted with the extra-legal scheme envisioned in the previous footnote, another possibility is simply to cast copyright — the right to copy — aside altogether in favor of a new legal regime. That course may be the natural sequel to the right to read critique; Prof. Litman suggests exactly that course. *See* Litman, *supra* note 42, at 40.

165. If, *mirabile dictu*, one rule simultaneously solves all three sets of equations, so much the better. But there is no need to hobble our inquiry *a priori* by rejecting legal theories that fail to work for one domain if they do indeed work for another.

166. *See* Raymond T. Nimmer & Patricia Ann Krauthaus, *Copyright on the Information Superhighway: Requiem for a Middleweight*, 6 STAN. L. & POL'Y REV. 25, 32 (1994).

167. *See* P. Bernt Hugenholtz, *Adapting Copyright to the Information Superhighway*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 81, 85 (P. Bernt Hugenholtz ed., 1996) ("'[P]ay-as-you-go' royalty scheme may be either time-based or volume-based."). In its most aggressive implementation, "[c]opyright might become part of a complicated telecommunications accounting system." Egbert J. Dommering, *Copyright Being Washed Away Through the Electronic Sieve*, *in* THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT 1, 9 (P. Bernt Hugenholtz ed., 1996).

168. This result emerges from Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991), which held a comprehensive directory unprotectable.

As this Article goes to press, an impending treaty sponsored by the World Intellectual Property Organization would overrule *Feist*. *See* Memorandum prepared by the Chairman of the Committees of Experts, World Intellectual Property Organization, Basic Proposal for the Substantive Provisions of the Treaty on Intellectual Property in Respect of Databases (Aug. 30, 1996) <http://www.loc.gov/copyright/wipo6.html>. The implementing legislation has been introduced as the Database Investment and Intellectual Property Antipiracy Act of 1996, H. R. 3531, 104th Cong. (1996). *See generally* Pamela Samuelson, *Legally Speaking: Legal Protections for Database Contents*, 39 COMMUNICATIONS OF THE ACM (forthcoming Nov. 1996); *see also* J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data: An Assault on the Worldwide Public Interest in Research and Development*, 50 VAND. L. REV. (forthcoming Jan. 1997) <http://ksgwww.harvard.edu/iip/reisamda.html> (arguing that current proposals give "overly broad" protection).

169. *See Feist*, 499 U.S.at 354 (citing 1 NIMMER ON COPYRIGHT, *supra* note 25, § 3.04).

copyright is not necessarily the most appropriate means to control tractor-trailer traffic on the superhighway.[170]

(2) At the other extreme lie the trikes. These, too, do not necessarily find a hospitable abode in traditional copyright doctrine. We could concede that Usenet postings written in ASCII text are technically protected by copyright law at their composition.[171] At the same time, they are frequently written in an environment in which posting and sharing are the expected norms. The universal expectation of netiquette[172] is that these postings will be forwarded. Their authors have arguably manifested an intent to abandon any copyright ownership by virtue of pressing the send button and releasing them into cyberspace.[173] Again, the best solution in this domain may be extra-copyright. Thus, as to the rules of the road in both extreme lanes, solutions other than traditional authors' rights should be taken under serious consideration.

(3) Along the median strip travel the regular cars. They are neither the tricycles of quick e-mail messages nor the semitrailer creations of comprehensive databanks. Intermediate between those two extremes, these cars are distinguished inasmuch as their precise contours are their selling points. In short, what matters here is expression.

A metering scheme serves poorly to protect such works of authorship. In cyberspace as in meatspace, that scheme would undercompensate some authors while overcompensating others. Hence, all the puzzles of current copyright law remain as its subject matter migrates to the Net.

C. Learning From The Blues

The last ingredient for a good marriage is "something blue." What is blue? Though not very good at colors, I do know enough to make one pronouncement: Blue is not red — as in the *Red Baron* case. Unlike the blinkered view that the Fourth Circuit adopted in that holding, what we need today is a very strong dose of common sense: We need a generous

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170. *See* Brad Cox, *Superdistribution*, WIRED, Sept. 1994, at 89.

171. One commentator disputes the proposition that chat-group chatter — in which "the exchange of messages takes place in real time" — satisfies the fixation requirement for the original composition to be subject to copyright protection. *See* Brandriss, *supra* note 43, at 265.

172. Note that this terminology has already percolated into the case law. *See* Religious Tech. Center v. Netcom On-Line Comm. Serv., Inc., 907 F. Supp. 1361, 1375 (N.D. Cal. 1995) ("informal rules and customs that have developed on the Internet").

173. A hornet's nest of contrary arguments lurks here. *See* Litman, *supra* note 38, at 51 n.106.

recognition of implicit licenses based on an appreciation of the actual underlying realities that are unfolding in the new environment in which works of ingenuity are being exploited. To that can be added judicious following of the Fourth Circuit's lead in defining copyright misuse when a proprietor tries to leverage its congressionally sanctioned rights into a domain where Congress has barred it.

We can also derive benefit from a constant awareness that the Internet may act as the newspaper of the future.[174] Another red flag waves here: We must pay due heed to the Supreme Court's seminal First Amendment[175] ruling[176] in *Red Lion Broadcasting v. FCC*.[177]

Not to disparage the blues, however, we can derive wisdom from that quarter of the human experience as well. Consider the pearl that lies inside a *Blue Box*:

> Even if an alleged copy is based on a copyrighted work, "a defendant may legitimately avoid infringement by intentionally making sufficient changes in a work which would otherwise be regarded as substantially similar to that of the plaintiffs."[178]

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174. *See* Religious Tech. Center v. Lerma, 908 F. Supp. 1353, 1359 (E.D. Va. 1995) ("rapidly evolving into both a universal newspaper and public forum"); Religious Tech. Center v. F.A.C.T.NET, Inc., 901 F. Supp. 1519, 1525-27 (D. Colo. 1995) (Internet postings foster "topical debate" as part of the "free exchange of dialogue on matters of public concern."). *See generally* ACLU v. Reno, 929 F. Supp. 824 (E.D. Pa. 1996), *review granted*, 65 U.S.L.W. ___ (U.S. Dec. 10, 1996) (No. 96-511).

175. The aspect of the First Amendment referenced here is its guarantee of freedom of speech. The Supreme Court has defined the right to speak to include the right not to speak. *See, e.g.*, Wooley v. Maynard, 430 U.S. 705, 736 (1977). The implications of that ruling on the right not to read this Article are such that the notice incorporated at the outset should be taken as permissive, not mandatory.

176. There is no shortage of articles exploring the First Amendment consequences of the Internet. *See generally* Patrick O'Neill, *Optimizing and Restricting the Flow of Information: Remodeling the First Amendment for a Convergent World*, 55 U. PITT. L. REV. 1057, 1062 (1994) (proposing "Information Flow model to apply to communication policy in an interactive and convergent world"); Jerry Berman & Daniel J. Weitzner, *Abundance and User Control: Renewing the Democratic Heart of the First Amendment in the Age of Interactive Media*, 104 YALE L.J. 1619, 1621 (1995) (arguing that to foster diversity, new media must have open and decentralized architecture, plus user control). Copyright bottlenecks at times can conflict with the First Amendment goals of speech abundance. *See id.* at 1626.

177. 395 U.S. 367 (1969). *See* Krattenmaker & Powe, *supra* note 6, at 1721 (*Red Lion* embodies "celebration of the values of access and diversity and concomitant fear of private censorship."). The right of reply, recognized by *Red Lion* as permissible, may be the only viable solution to defamation on the Net. *See* Branscomb, *supra* note 138, at 1671 (citing opinions of general counsels of Prodigy and America Online that no other viable alternatives exist).

178. Original Appalachian Artworks, Inc. v. Blue Box Factory, 577 F. Supp. 625, 629 (S.D.N.Y. 1983) (quoting 3 NIMMER ON COPYRIGHT, *supra* note 25, § 13.03[B]).

Despite the fact that intermediate copying can at times give rise to liability,[179] the far more common scenario is to evaluate the ultimate product that a defendant releases to the public to determine whether it is infringing. Let us imagine a defendant who uploads a plaintiff's poem to her computer workspace solely to use it as an inspiration,[180] ultimately producing her own work by deleting every word from that original poem except "The End" and thereby producing a poem original in every other regard.[181] "It can hardly be doubted that defendant in this scenario has not infringed,[182] notwithstanding proof of (1) copying of the foregoing trifle and (2) access, which are nominally the two elements of infringement."[183] Thus, using one's computer as an inspirational "holding mechanism," a springboard for independent creation, should be privileged.[184] Once again in this particular,[185] I share the concern of the right-to-read camp and would look sympathetically at limiting copyright liability accordingly.[186]

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179. *See* Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Walt Disney Prods. v. Filmation Assocs., 628 F. Supp. 871 (C.D. Cal. 1986). *See infra* text accompanying note 196.

180. "Joan Didion says reading Hemingway taught her 'how sentences worked. When I was 15 or 16 I would type out his stories to learn how the sentences worked. I taught myself to type at the same time. A few years ago when I was teaching a course at Berkeley I reread *A Farewell to Arms* and fell right back into those sentences. I mean they're perfect sentences. Very direct sentences, smooth rivers, clear water over granite, no sinkholes.'" THOMAS MALLON, STOLEN WORDS: FORAYS INTO THE ORIGINS AND RAVAGES OF PLAGIARISM 124 (1989).

181. This hypothetical is drawn from 3 NIMMER ON COPYRIGHT, *supra* note 25, § 13.03[B][1][b], from the sentence immediately following that cited by the *Blue Box* decision quoted above. *See supra* note 178. The operative assumption here is that the user first obtained lawful access to the work that is being reproduced for inspirational purposes.

182. Italian law contains a helpful flourish in this particular—"[T]he Act states that the reproduction of single works or of portions of works for the personal use of readers, when made by hand or by a means of reproduction unsuitable for circulating or diffusing the work in public, is exempt." Mario Fabiani, *Italy*, *in* INTERNATIONAL COPYRIGHT LAW AND PRACTICE, § 8[2][a][ii] (Melville Nimmer & Paul Geller eds., 1996).

183. 3 NIMMER ON COPYRIGHT, *supra* note 25, § 13.03[B][1][b] (footnotes omitted). *Cf.* Litman, *Copyright as Myth*, *supra* note 83, at 247 ("The statute might prescribe withholding protection from much of the work because of its antecedents [in wholesale copying]; a cause of action for infringement might have already accrued, but nobody will ever know.").

184. The rub arises if the user uploads plaintiff's poem to her RAM not from a purchased CD-ROM, for example, but as a result of a previous, unauthorized download. *See supra* note 181. As noted above, legitimate buyers enjoy greater latitude than Jolly Roger. *See supra* text following note 83.

185. But not only in this particular—the treatise excerpt quoted above actually deals with low-tech copying, rather than copying via a computer. The analysis is the same whether the intermediate copy is made in RAM, in braille, or on foolscap.

186. *See* Katsh & Rifkin, *supra* note 2, at 58 ("Copying may occur as a stage in the creative process and not be an end in itself but a means toward some legitimate end.").

Turning now directly to that *Blue Pearl*[187] itself, we enter uncharted territory. Dictum in that case suggests that a court could order re-creation of a lost *opus*, to the extent that a defendant "had stolen the only copies of the musical works in question from the [plaintiff] and then destroyed them, and the record further disclosed that she had committed the works to memory, that she was technically competent to re-create them, and that she was the only person in the world who could re-create the lost material."[188] This holding presages the possibility that the human brain might be the only storage medium for a copyrightable composition![189]

D. Beyond the Valley of the Dolls

That tantalizing possibility leads to some interesting thoughts about the brain and like paraphernalia. Copyright lawyers of the future may well need to confront the precise question of whether a computer is a brain.

Consider the application of the brain/computer question to fixation. In the United States, protection of an oral sermon or jazz improvisation stands outside of statutory copyright.[190] By contrast, the copyright laws of other nations — Italy and Japan, to name two examples — embody no such disqualification.[191] The disparity stems from the U.S. Constitution, which authorizes Congress to protect only the "writings" of "authors." That constitutional basis has been consistently interpreted to require fixation as a condition for copyright protection.[192] As the statute itself states:

> A work is "fixed" in a tangible medium of expression when its embodiment in a copy or phonorecord . . . is sufficiently

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187. Blue Pearl Music Corp. v. Bradford, 728 F.2d 603 (3d Cir. 1984) (involving the composition "Your Arm's Too Short to Box with God").

188. *Id.* at 606 n.4.

189. *See id.* at 606 n.3 (questioning existence of "copies of the work other than in Mrs. Bradford's head").

190. *See* 1 NIMMER ON COPYRIGHT, *supra* note 25, § 2.02.

191. *See* Teruo Doi, *Japan*, *in* INTERNATIONAL COPYRIGHT LAW AND PRACTICE, § 2[1][a] (Melville Nimmer & Paul Geller eds., 1996); Mario Fabiani, *Italy*, *in id.* § 2[2][a] (protection extends to improvised oral works, such as *Commedia dell'arte*). But apropos of our focus on brains, it is worth adding that even under Italian law, a "representation that can be perceived by others, is essential," so that "copyright does not protect pure thought." *Id.* § 2[1][a].

192. *See, e.g.*, Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 355 (1991). It would appear, nonetheless, that Congress blithely tossed that limitation out the window in 1994. *See* David Nimmer, *The End of Copyright*, 48 VAND. L. REV. 1385, 1409 (1995).

> permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.[193]

That statutory provision connotes that loading a program or other work into a computer's RAM fixes it because it can be accessed from there — the precise holding of *MAI v. Peak*. On the other hand, reciting a poem to a live audience, or improvising jazz in front of them, indubitably fails to satisfy the prerequisites of fixation.

But another question immediately intrudes: What if Avi recites an extemporaneous poem to one blessed with perfect recall? What if President Clinton plays a jazz cadenza on his saxophone at a Prague cafe such that John Coltrane could reproduce the result, nuance for nuance?[194] If the brain is a computer, then that fixes it. We thereby obtain a nice convergence between the U.S. Constitution, and Japanese and Italian law.

A further application of the puzzle arises: When a novel has been duly sold under a license from the copyright owner and Talia reads it — thereby exercising her current right to read in a fashion that I would join Professor Litman in defending to the death — that activity is plainly noninfringing. She could go even further with the book that she purchases at B. Dalton's and extract out of it the author's "style," in order to augment her own craft with tools learned from this new experience. If Vikram Seth's method of composing sonnets inspires me to set new versions of *Nimmer on Copyright* to iambic pentameter, the progress of science and the useful arts marches on.[195]

But computer programs sold in object-code format cannot be browsed, cannot even be read for this purpose. Instead, they guard those components; in other words, because the software exists simply as a string of zeroes and ones, it is impossible for a user to extract out the uncopyrightable "style," even when we are dealing with a legitimate purchaser of the software. For that reason, the case law expands the notion of fair use to hold that reverse engineering of rightfully procured copies is permitted in order to extract out unprotectable elements.[196]

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193. 17 U.S.C. § 101 (1994).

194. *See* 140 CONG. REC. H11458 (daily ed. Nov. 29, 1994) (statement of Rep. Hughes) ("[I]t is my understanding that a bootleg recording of the President's jam session in Prague is currently being sold by mail order from New York. I've also heard the President's recording doesn't pose any competition to recordings of Lester Young or Coleman Hawkins.").

195. *See* Litman, *Copyright as Myth*, *supra* note 83, at 239-44.

196. *See* Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832 (Fed. Cir. 1992) (no such right for wrongfully procured copies). *See also* Bateman v. Mnemonics, Inc., 79 F.3d 1532, 1539

Even though copying in RAM may constitute an act of reproduction, those courts hold such copying permissible when undertaken for the protected purpose of extracting unprotectable elements.

Now we confront the curious case of Scott French and his computer.[197] Scott French programmed his computer to write novels in the style of Jacqueline Susann.[198] In fact, the computer-generated product was so similar to the underlying *oeuvre* by Jacqueline Susann that it was hard to tell the two apart, except for the fact that French's computer garnered more favorable literary reviews.[199]

Should we now ask whether French's computer itself deserves to be hauled away to jail for copyright infringement?[200] After all, the only way that the computer could learn the stylistic devices from Jacqueline Susann was to "read" her works the same way that Talia is privileged to read a book that she purchased from B. Dalton's. But as we have seen numerous times already, when a computer "reads" a work, it is the same thing as copying it. On the other hand, if we analogize to the reverse engineering cases, what Scott French's computer did is simply fair use — it analyzed the work in order to extract out unprotectable elements. Indeed, if we accept the culture of the *Blue Pearl*, then French's computer is neatly cabined within the *Blue Box*. For if the computer is a brain, it follows that only biological prejudice (carbonism? anti-siliconism?) prevents us from acknowledging its right to read a copy to which it previously obtained rightful access. If not, then it might be an infringer under current law.

An even darker possibility looms here. It has already been noted that computers retain the ability to fix copyrightable compositions for as long as their electrical current remains live.[201] By the same token, the human brain with perfect recall serves as a fixation medium — but only

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n.18 (11th Cir. 1996) (dictum calling *Sega Enterprises* "persuasive").

197. Mr. French's computer is not the first silicon brain to try its hand at the scribal arts. *See* RACTER, THE POLICEMAN'S BEARD IS HALF CONSTRUCTED (1984) (A sample of the computer's prose reads: "Benton saw Lisa, then began to revile her. He yodeled that Lisa possessed an infatuation for Diane, that her spirit was nervous, that she could thoughtfully murder her and she would determinedly know nothing."). For a wonderful treatment of this field, *see generally* DOUGLAS HOFSTADTER & THE FLUID ANALOGIES RESEARCH GROUP, FLUID CONCEPTS AND CREATIVE ANALOGIES 158, 471, 480-81 (1995).

198. *See* SCOTT FRENCH & HAL, JUST THIS ONCE (1993).

199. For a review of this matter, *see generally* Tal Vigderson, Note, *Hamlet II: The Sequel? The Rights of Authors vs. Computer-Generated "Read-Alike" Works*, 28 LOY. L.A. L. REV. 401 (1994).

200. *See supra* note 40.

201. *See supra* note 47.

so long as its oxygen flow continues.[202] Modulating the *leitmotif* running through this Article on criminal liability, the question arises: If a computer equates to a brain, is turning off its power supply tantamount to murder?[203] And bringing the matter back home: Does an unwillingness to answer that question affirmatively translate automatically into an unwillingness to recognize French's computer as an autonomous agent with its own independent right to read?

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Questions, questions. But where are the answers? The attentive reader can draw her own conclusions about the right to read in both volatile and traditional environments. Meanwhile, the journey from that right to questions of the brain's ontology, leading to musings on the definition of murder, might lead one to conclude that copyright, which Justice Story long ago recognized as the law's metaphysics,[204] is metamorphosing into something approaching theology. We leave to our heirs — whether the progeny of our loins, or the disembodied CPUs that some suspect will carry on our culture[205] — no dearth of puzzles, as the

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202. One could posit the opposite — that fixation of thoughts in the fabric of the brain causes a material change that could be deciphered even without the volition of the brain's custodian. In that way, perhaps cutting off the oxygen flow to the brain's host would not immediately degrade the information, in the same way that loss of electric current to non-volatile RAM is not deadly. Although neurologists are far from any such discovery in the human brain, there is some appeal to the proposition that the simple act of learning alters the physical brain of the learner. *See* BART KOSKO, FUZZY THINKING: THE NEW SCIENCE OF FUZZY LOGIC 206 (1993) (encapsulating the learning process as: "Your brain changes. Three pounds of meat changes.").

203. Recursively unwinding back to *Star Trek*, one episode features Data (whose positronic brain is unquestionably a computer, *see Star Trek: The Next Generation: The Measure of a Man* (Feb. 11, 1989, StarDate 42523.7) ("When Data refuses to be disassembled for research purposes, Picard is enlisted to defend his rights in court.").) disobeying a direct order because, in his estimation, compliance would risk machines that he viewed as sentient, and hence, as "primitive life forms."; *Star Trek: The Next Generation: The Quality of Life* (Nov. 14, 1992, StarDate 46307.2) ("Data risks Picard and Geordi's lives in order to protect another 'living machine'."). That fastidiousness is puzzling, given the breeziness with which moral agents in Gene Roddenberry's universe demolish their opponent's computers without compunction. *See, e.g., Star Trek: The Apple* (Oct. 13, 1967, StarDate 3715.3) ("The Enterprise finds itself under attack by Vaal, a machine that guides the actions and even the environment of a primitive populace."); *Star Trek: Return of the Archons* (Feb. 9, 1967, StarDate 3156.2) ("An entire planet is under the total mental control of a mysterious being known as 'Landru'.").

204. *See* Folsom v. Marsh, 9 F. Cas. 342, 344 (C.C.D. Mass. 1841) ("the metaphysics of the law, where the distinctions are, or at least may be, very subtle and refined, and, sometimes, almost evanescent").

205. *See* ED REGIS, GREAT MAMBO CHICKEN AND THE TRANSHUMAN CONDITION (1990).

Internet and related phenomena push copyright law deeper and deeper into the realm of brainteasers.